

# Service Manual

Car Audio

FM-AM-FM STEREO  
CASSETTE DECK/TUNER/AMPLIFIER

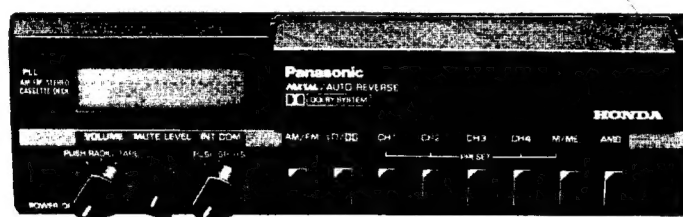
RM-1300A  
RM-1400A  
(Black)

CUSTOM-MADE FOR HONDA



This is the Service Manual  
for the following area.

**M** ...For U.S.A.



Spare parts for this model have already been unable to supply.  
However, we un-officially may supply a few items.  
Please contact us regarding this matter.

## ■ SPECIFICATIONS

### General

Power Source: DC 12V (Negative ground only)  
DC 14V  
Test Voltage:  
Power Consumption: 0.8A at maximum power output  
(Memory backup 0.5mA)  
Dimensions: 208mm(W)×64mm(H)×144mm(D)  
(8<sup>1</sup>/<sub>16</sub>×2<sup>9</sup>/<sub>16</sub>×5<sup>11</sup>/<sub>16</sub>) without bracket  
Weight: 1.7kg (3 lb 3/4 oz) without bracket

### FM Tuner Section

Frequency Range: 87.5~107.9MHz  
Usable Sensitivity: 8dB (S/N 30dB)  
Signal to Noise Ratio: 55dB  
Stereo Separation: 35dB at 1kHz  
THD: 0.5%  
IF Frequency: 10.7MHz

### AM Tuner Section

Frequency Range: 530~1620kHz  
Usable Sensitivity: 34dB (S/N 20dB)  
Selectivity: 50dB (±10kHz)  
IF Frequency: 450kHz

### Cassette Deck Section

Tape System: Auto-reverse  
Wow & Flutter: 0.15% (WRMS)  
Stereo Separation: 35dB at 1kHz

### Intercom Section

Mike Input Impedance: 600Ω  
Headphone Output: 0.5W (16Ω/CH)

\*"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.  
Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.  
Weights and dimensions shown are approximate.  
Design and specifications are subject to change without notice.

# Panasonic

Matsushita Engineering and  
Service Company  
50 Meadowland Parkway,  
Secaucus, New Jersey 07094

Panasonic Hawaii Inc.  
91-238 Kauhū St. Ewa Beach  
P.O. Box 774  
Honolulu, Hawaii 96808-0774

Panasonic Sales Company,  
Division of Matsushita Electric  
of Puerto Rico, Inc.  
Ave. 65 De Infantaria, KM 9.7  
Victoria Industrial Park  
Carolina, Puerto Rico 00630

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## LOCATION OF CONTROLS AND COMPONENTS

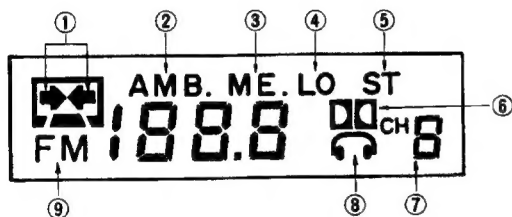


Fig. 1

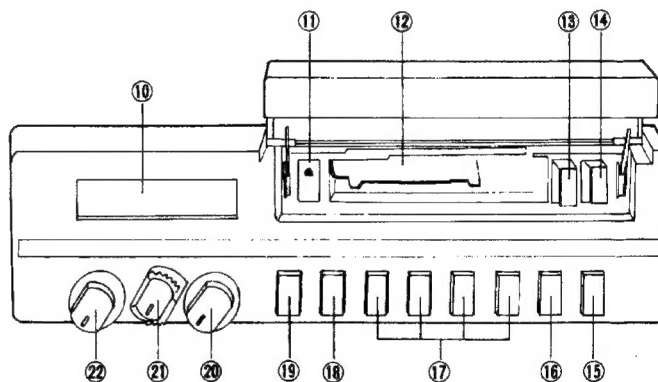


Fig. 2

- ① Direction Indicators
- ② Ambience Indicator
- ③ Metal/Memory Indicator
- ④ Local/DX Indicator
- ⑤ FM Stereo Indicator
- ⑥ Dolby Indicator
- ⑦ Preset CH Indicator
- ⑧ Headset Indicator
- ⑨ AM/FM Indicator
- ⑩ LCD Display
- ⑪ Eject Button
- ⑫ Tape Slot
- ⑬ Rewind Button

- ⑭ Fast Forward Button
- ⑮ Ambience Switch (ON/OFF)
- ⑯ Metal/Memory Switch (M/ME)
- ⑰ Preset Switches (CH1/PRO., CH2, CH3, CH4)
- ⑱ Sensitivity Switch, Dolby Switch (DX/LOCAL, DOLBY ON/OFF)
- ⑲ Band Switch (AM, FM)
- ⑳ Speaker/Headset Switch, Intercom Switch/Control Volume (PUSH SP/HS)
- ㉑ Mute Level Control (MUTE LEVEL)
- ㉒ Radio/Tape Switch, Power Switch, Volume Control (PUSH RADIO/TAPE, POWER OFF)

# DISASSEMBLY INSTRUCTIONS

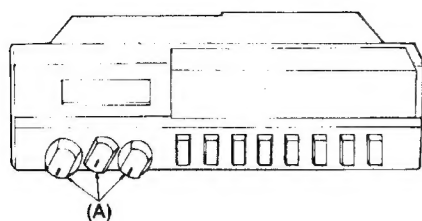


Fig. 1

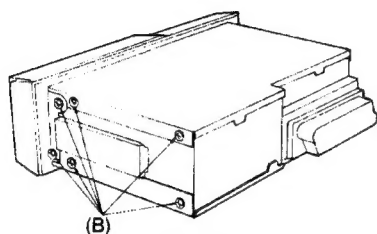


Fig. 2

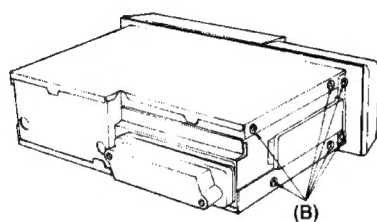


Fig. 3

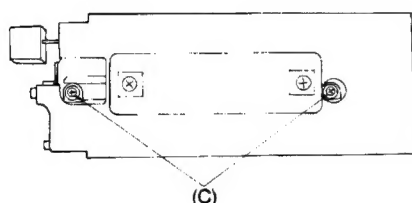


Fig. 4

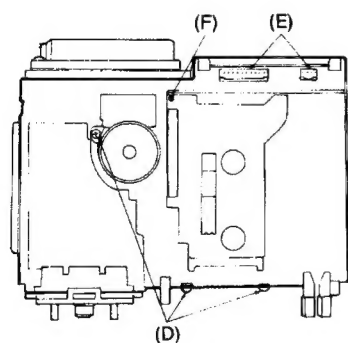


Fig. 5

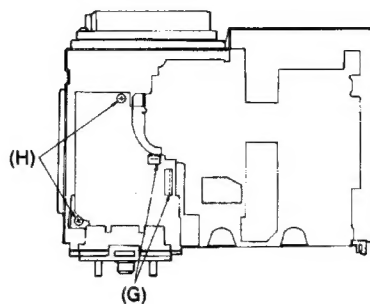


Fig. 6

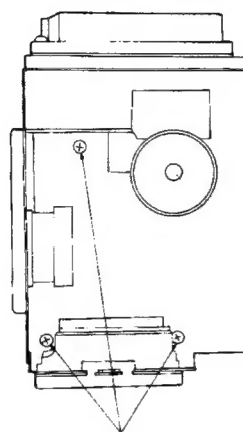


Fig. 7

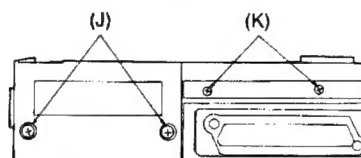


Fig. 8

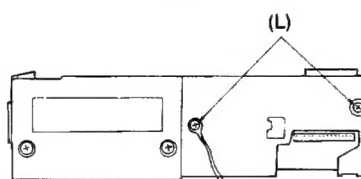


Fig. 9

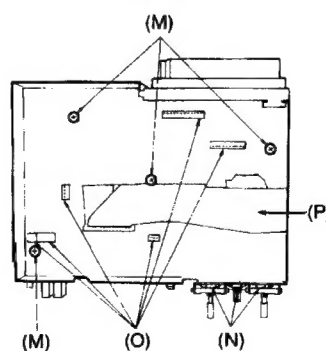


Fig. 10

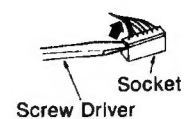


Fig. 11

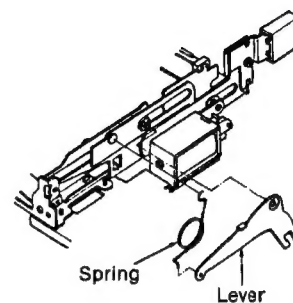


Fig. 12

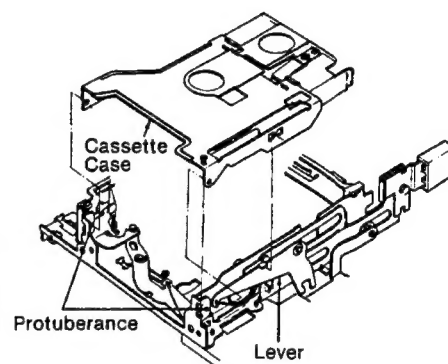


Fig. 13

Ref. No.	Procedure	Shown in Fig. —.	To remove —.	Remove —.
1	1, 2	1	Front Panel, Covers	Knob .....(A)×3
2		2, 3		Screw (3×6)mm .....(B)×12
3	1~5	4	Mechanism	Screw (2.6×5)mm .....(C)×2
4		5		Screw (2.6×5)mm .....(D)×3
5				Socket *1 .....(E)×2
6	1~6	5	Cassette Case *2	Loosen screw .....(F)×1
7	1~8	6	AM Circuit Board	Socket *1 .....(G)×2
8				Screw (3×6)mm .....(H)×2
9	1~9	7	LCD Circuit Board	Screw (3×6)mm .....(I)×3
10	1~5, 10	8	Deck EQ & Ambience Circuit Board	Screw (3×6)mm .....(J)×2
11	1, 2, 11, 12	8	Power Source Circuit Board	Screw (3×4)mm .....(K)×2
12		9		Screw (3×4)mm .....(L)×2
13	1, 2, 13~16	10	Main Circuit Board	Screw (3×6)mm .....(M)×4
14				Nut (7φ) .....(N)×3
15				Socket *1 .....(O)×7
16				Jumper (FPC) .....(P)×1

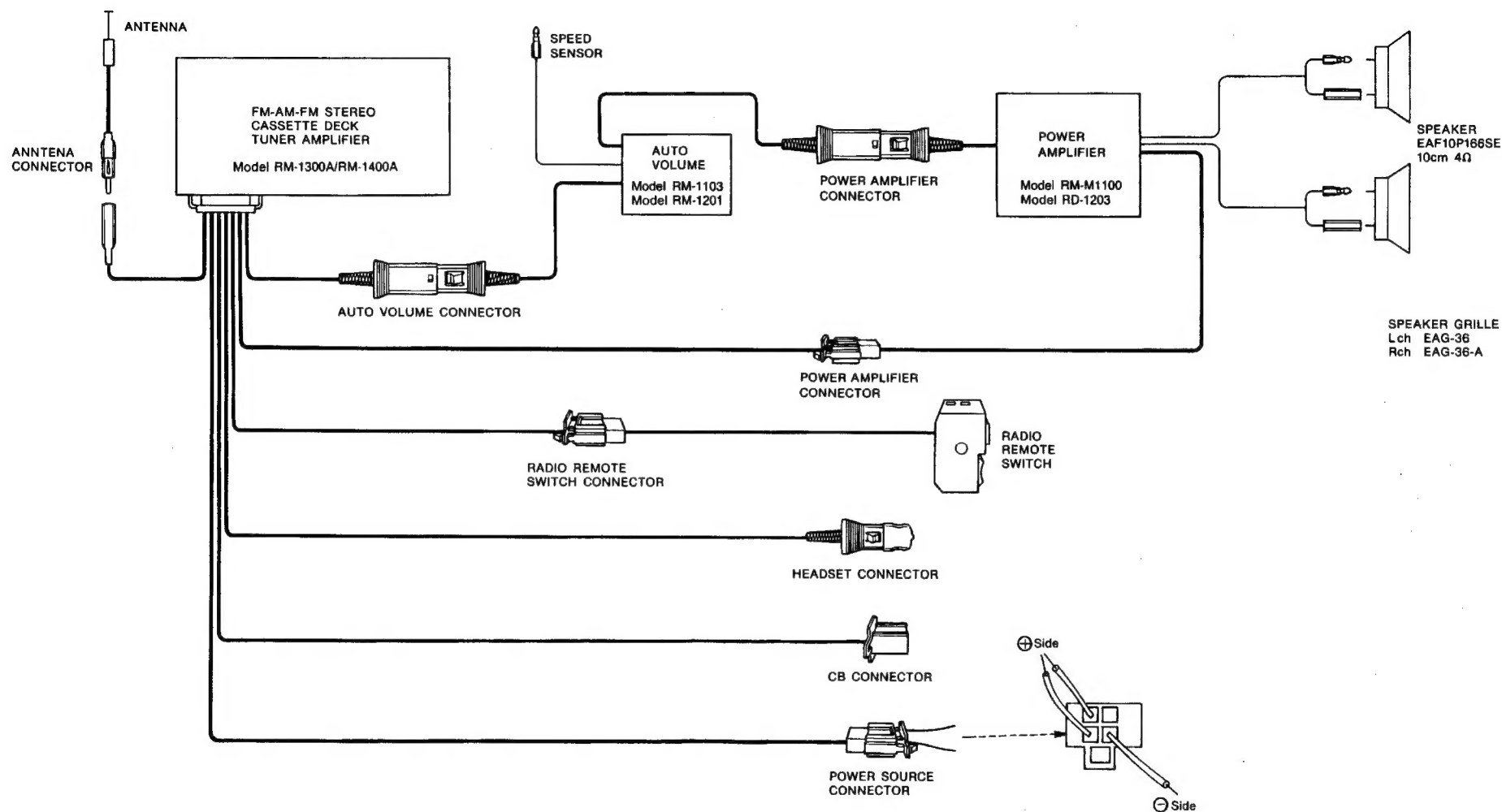
\*1. Remove socket in the direction of arrow as shown in fig. 11.

\*2. To reassemble, note the following.

(1) Insert the lever and spring in mechanism, as shown in fig. 12.

(2) Insert the cassette case as shown in fig. 13.

## AUDIO SYSTEM CONNECTION



HARNESS CONNECTION

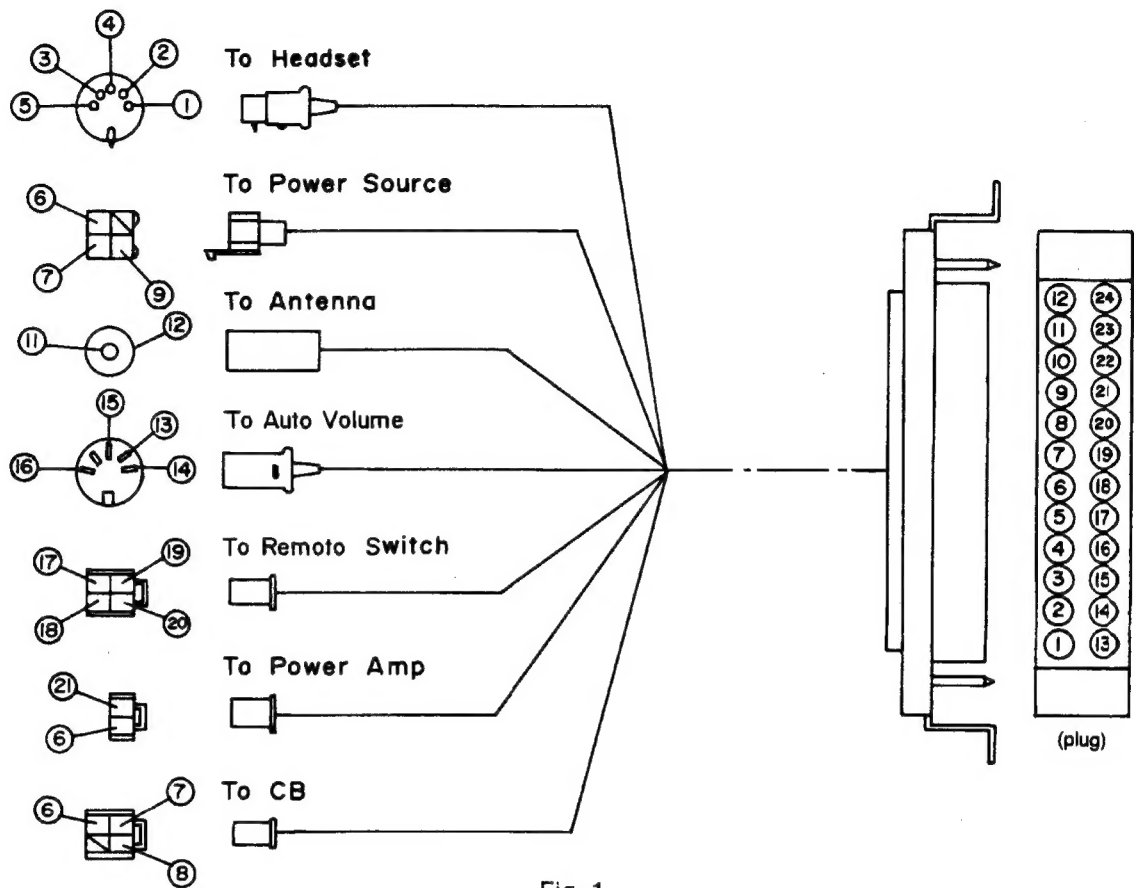
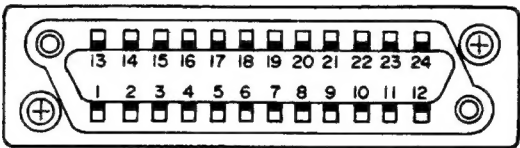


Fig. 1



(socket)

- |              |          |
|--------------|----------|
| ① Microphone | ⑬ Rch    |
| ② Earth      | ⑭ Lch    |
| ③ Rch        | ⑮ Earth  |
| ④ Earth      | ⑯ +B Out |
| ⑤ Lch        | ⑰ Mute   |
| ⑥ Acc        | ⑱ Up     |
| ⑦ CB         | ⑲ Down   |
| ⑧ Earth      | ⑳ Earth  |
| ⑨ Earth      | ㉑ Earth  |
| ⑩ Earth      | ㉒ Earth  |
| ⑪ Antenna    | ㉓ Earth  |
| ⑫ Earth      | ㉔ Earth  |

Fig. 2

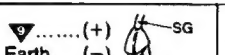
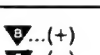
# MEASUREMENTS AND ADJUSTMENTS

1. Set power switch to ON.
2. Mute switch on Remote switch to OFF.
3. SP/HS switch to HS.



4. Set volume control to maximum.
5. Set band switch to AM, FM.
6. Set SENS switch to DX.

## ■ AM IF ALIGNMENT

BAND	SIGNAL GENERATOR or SWEEP GENERATOR		FREQUENCY DISPLAY SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
	CONNCTIONS	FREQUENCY				
AM-IF ALIGNMENT						
(1) AM		450 kHz 30% Mod. at 400 Hz	Point of non-interference. (on/ about 600 kHz)		T302 (AM 1st IFT) T303 (AM 2nd IFT)	Adjust for maximum output.





## ■ AM RF ALIGNMENT

BAND	AM SIGNAL GENERATOR		FREQUENCY DISPLAY SETTING	DC VOLT METER	ADJUSTMENT	REMARKS
	CONNECTIONS	FREQUENCY				
(1)	Disconnect	No signal applied	530 kHz	.....(+) .....(-)	L303 (AM OSC Coil)	Adjust for $1.2 \pm 0.05$ V reading on DC voltmeter
(2)	Disconnect	No signal applied	1620 kHz	.....(+) .....(-)	CT302 (AM OSC Trimmer)	Adjust for $7.8 \pm 0.1$ V reading on DC voltmeter
(3)	Repeat steps (1) and (2).					
BAND	AM SIGNAL GENERATOR		FREQUENCY DISPLAY SETTING	AC VOLT METER	ADJUSTMENT	REMARKS
	CONNECTIONS	FREQUENCY				
(4)	Connect to antenna socket through AM RF dummy antenna. (Refer to Fig. 6)	600 kHz	600 kHz	.....(+) .....(-)	L301 (AM ANT Coil) L304 (AM ANT Coil)	Adjust for maximum reading on AC voltmeter
(5)	"	1400 kHz	1400 kHz	.....(+) .....(-)	CT301 (AM ANT Trimmer) CT303 (AM ANT Trimmer)	"
(6)	Repeat steps (4) and (5).					

## ■ AM NB ALIGNMENT

BAND	AM SIGNAL GENERATOR		FREQUENCY DISPLAY SETTING	OSCILLOSCOPE	ADJUSTMENT	REMARKS
	CONNECTIONS	FREQUENCY				
AM	Connect to antenna socket through AM RF dummy antenna. (Refer to Fig. 6)	600 kHz (400 Hz, 0% Mod. 74 dB)	600 kHz	.....(+) .....(-)	T301 (AM NB)	Adjust for maximum wave from on oscilloscope.

## ■ FM ALIGNMENT

BAND	SIGNAL GENERATOR or SWEEP GENERATOR		FREQUENCY DISPLAY SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS	
	CONNECTIONS	FREQUENCY					
FM-IF ALIGNMENT							
(1)	FM	High side thru. 0.001 $\mu$ F to test point  , Negative side to test point  .	10.7 MHz SWP.	Point of non-interference. (on/ about 90 MHz)	Connect vert. amp. of scope to test point  . Negative side to test point  .	T1 (FM 1st IFT)	Adjust for maximum amplitude. (Refer to Fig. 3)
(2)	FM	"	"	"	"	T3 (FM 2nd IFT)	Adjust for maximum amplitude. (Refer to Fig. 4)

## ■ FM RF ALIGNMENT

BAND	FM SIGNAL GENERATOR		FREQUENCY DISPLAY SETTING	DC VOLTMETER	ADJUSTMENT	REMARKS
	CONNECTIONS	FREQUENCY				
(1)	Disconnect	No signal applied	87.5 MHz	$\nabla \dots (+)$ $\nabla \dots (-)$	L5 (FM OSC Coil)	Adjust for $1.2 \pm 0.05$ V reading on DC voltmeter.
(2)	Disconnect	No signal applied	107.9 MHz	$\nabla \dots (+)$ $\nabla \dots (-)$	CT3 (FM OSC Trimmer)	Adjust for $8 \pm 0.1$ V reading on DC voltmeter.
(3)	Repeat steps (1) and (2).					
BAND	FM SIGNAL GENERATOR		FREQUENCY DISPLAY SETTING	AC VOLTMETER	ADJUSTMENT	REMARKS
	CONNECTIONS	FREQUENCY				
(4)	Antenna socket (FM RF Dummy Fig. 7)	90.1 MHz (400 Hz 30%)	90.1 MHz	$\nabla \dots (+)$ $\nabla \dots (-)$	L1 (FM ANT Coil) L4 (FM ANT Coil)	Adjust for maximum reading on AC voltmeter
(5)	"	106.1 MHz (400 Hz 30%)	106.1 MHz	$\nabla \dots (+)$ $\nabla \dots (-)$	CT1 (FM ANT Trimmer) CT2 (FM ANT Trimmer)	"
(6)	Repeat steps 4 and 5.					

## ■ DC BALANCE NB ALIGNMENT

BAND	FM SIGNAL GENERATOR		FREQUENCY DISPLAY SETTING	DC VOLTMETER (center "0")	ADJUSTMENT	REMARKS
	CONNECTIONS	FREQUENCY				
FM	Antenna socket	90.1 MHz (400 Hz, 30% Mod, 60 dB)	90.1 MHz	$\nabla \dots (+)$ $\nabla \dots (-)$	T3 (FM 2nd IFT)	Adjust T3 for $-0.05 \sim 0.05$ V reading on DC voltmeter.

## ■ FM STEREO ALIGNMENT

Notes: 1. Stereo modulator ..... • Connect stereo modulator output to EXT MOD terminal of signal generator. 2. FM signal generator ..... • Pilot signal modulation to "10%". • Frequency approximately 100 MHz/Output level to "60~70 dB", 1~3 mV. • Modulation mode to "FM".					
CIRCUIT	SIGNAL GENERATOR	FREQUENCY COUNTER	AC VOLTMETER	ADJUSTMENT	REMARKS
PILOT	90.1 MHz (0% Mod, 80 dB)	High side thru, 100 k $\Omega$ to test point $\nabla$ . Negative side to $\nabla$ .	—	VR2 (Pilot)	Adjust for 76.00 kHz $\pm$ 50 Hz reading on frequency counter.
SEPARATION	90.1 MHz (400 Hz, 30% Mod, 80 dB)	—	$\nabla \dots Lch (+)$ $\nabla \dots Rch (+)$ $\nabla \dots (-)$	VR1 (Separation)	Make adjustment so that when the antenna input is subjected to L modulation (or R modulation,) R channel output (or L channel output) becomes minimum.

## ■ AZIMUTH ALIGNMENT

TAPE	AC VOLTMETER①	AC VOLTMETER②	ADJUSTMENT	REMARKS
Playback the azimuth tape. QZZCAC (10 kHz $\sim$ 20 dB)	$\nabla \dots (+)$ $\nabla \dots (-)$	Across headset $\nabla \dots (+)$ $\nabla \dots (-)$	Azimuth Screw (Refer to Fig. 5)	Adjust for same reading on AC voltmeter① and ②.

## ■ DOLBY LEVEL ALIGNMENT

ITEM	INPUT	MEASUREMENT POINT	SPECIFICATION	ADJUSTMENT POINT	REMARKS
Dolby Level	Tape QZZCFM (315 Hz 0 dB)	$\nabla \dots (R)$ $\nabla \dots (L)$ $\nabla \dots (-)$	420 mV $\pm$ 1 dB	VR501 (R) VR502 (L)	Dolby switch ... OFF



# ■ ALIGNMENT POINT

\*See the schematic diagram and the circuit board and wiring connection diagram for the location of the test points.

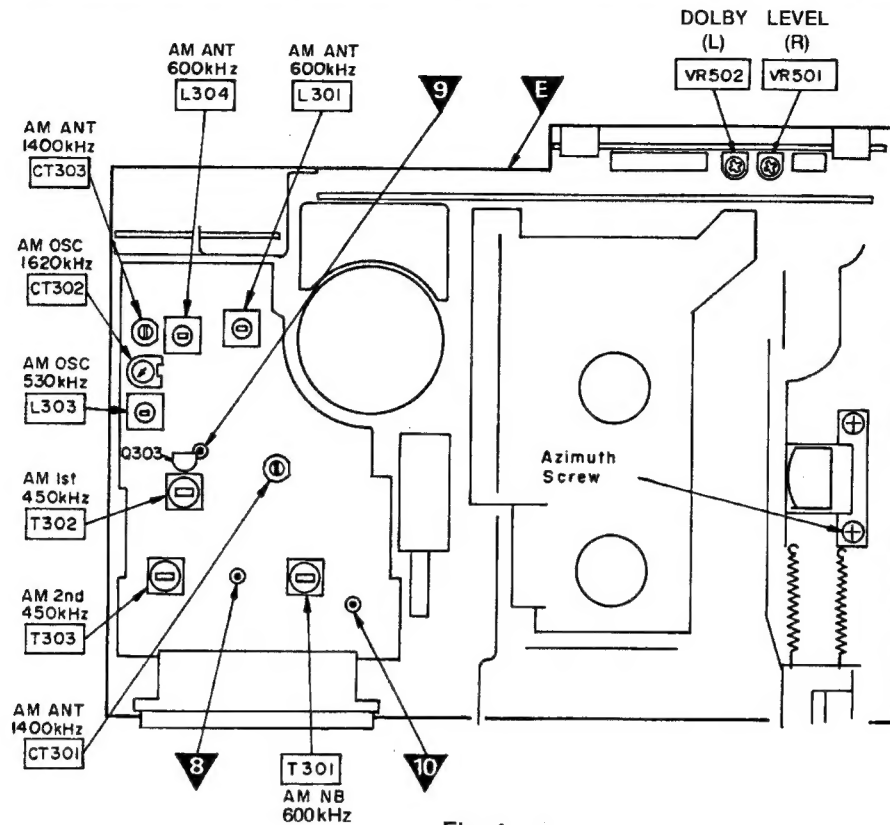


Fig. 1

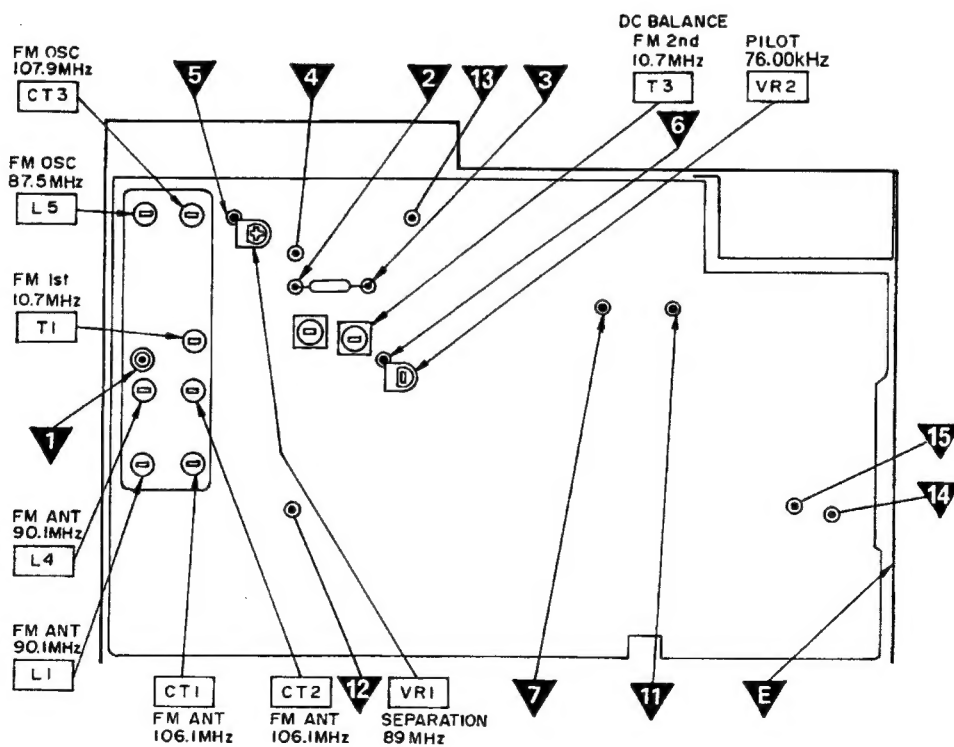


Fig. 2

■ WAVE FORM

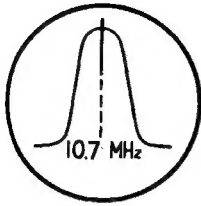


Fig. 3

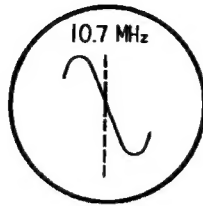


Fig. 4

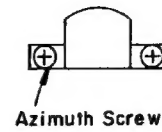


Fig. 5

■ AM RF DUMMY ANTENNA

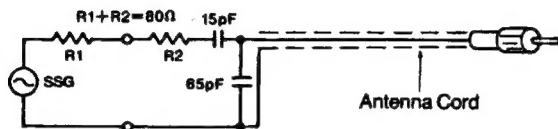


Fig. 6

■ FM RF DUMMY ANTENNA

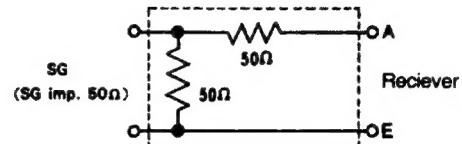


Fig. 7

## LIQUID CRYSTAL DISPLAY (LCD)

- 1) The common and segment terminals of the LCD are connected in the following way:

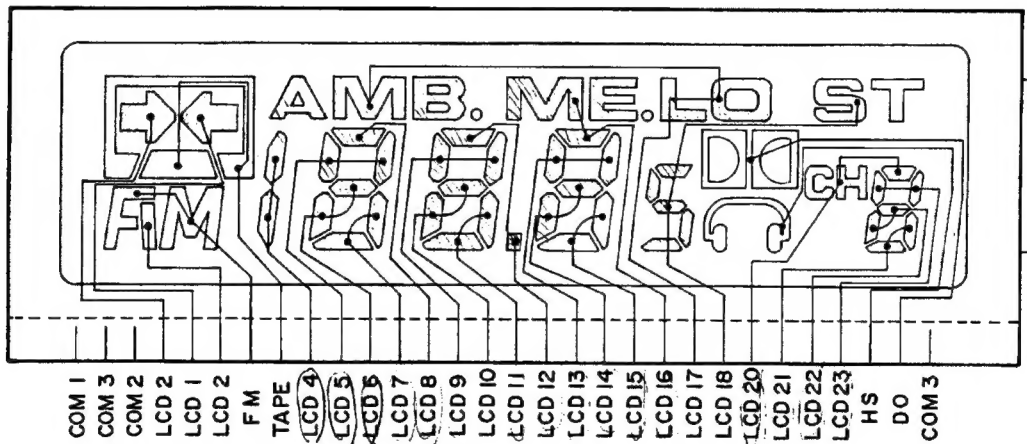


Fig. 1

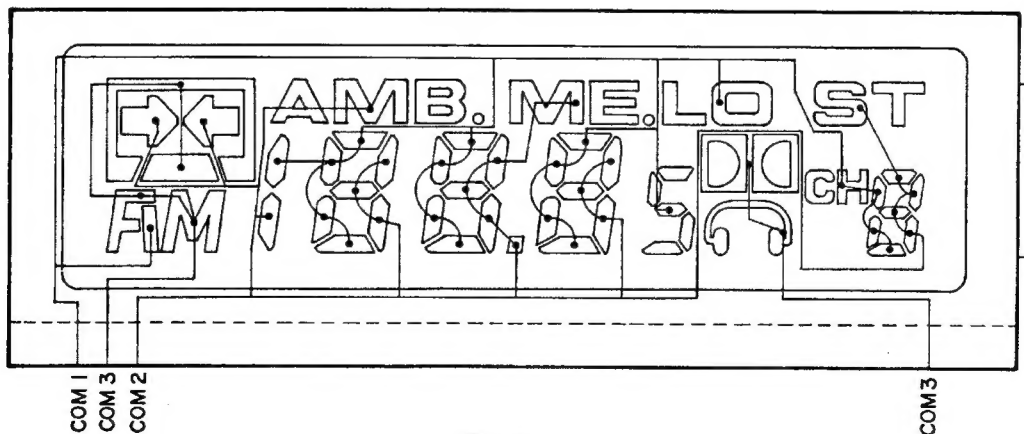


Fig. 2

## 2) Output signal waveforms of LCD segment

The illumination or nonillumination of segments (LCD1~23) on the LCD is determined by the combination of the segment drive signal and the common drive signals (COM1 and 2) from IC401. (See Fig. 3.)

The illumination or nonillumination of segments other than LCD1~23 (FM, Tape, HS, DO) is determined by the combination of the 80Hz signal made by the oscillation circuits in Q403 and Q404 and the segment drive signal made in IC402.

ex. Example display ("3")

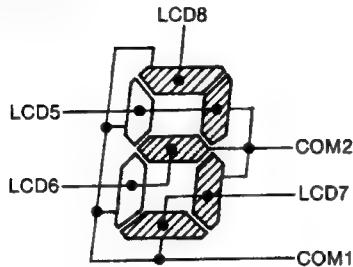


Fig. 3

## UPD1708G555 (IC401): EACH TERMINAL FUNCTION & WAVEFORM

### 1) Terminal View

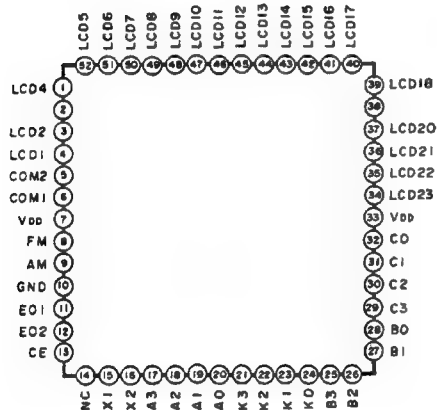


Fig. 1

### 2) Block Diagram

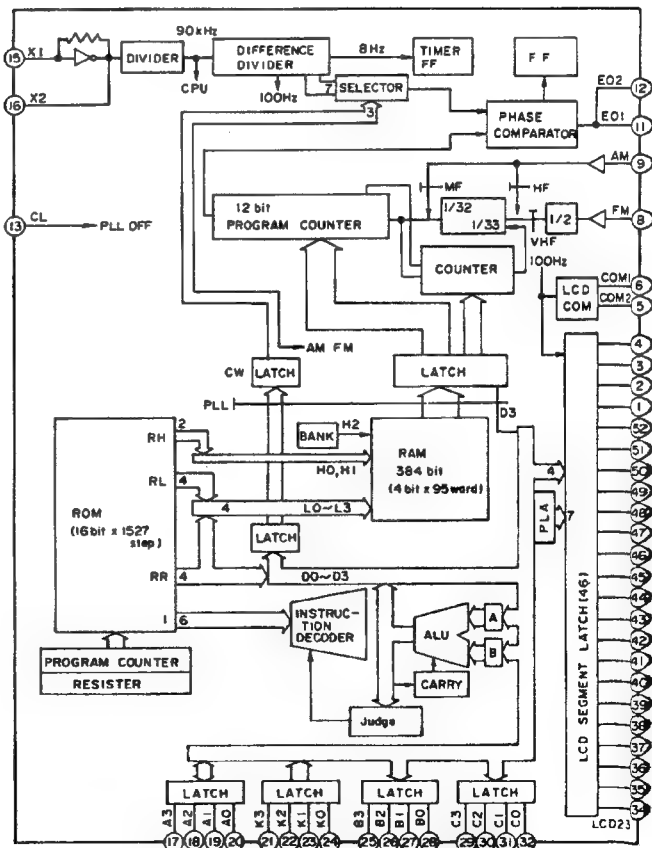


Fig. 2

## 3) Function of terminal (PLL controller IC401)

Pin No.	Mark	Description of terminal
1 } 4 34 } 52	LCD4 } LCD1 LCD23 } LCD5	Segment signal output terminal for display. (Refer to Fig. 1.)
5	COM2	Common signal output terminal connected to LCD. Output is delivered in 3 values of ground, $1/2V_{DD}$ and $V_{DD}$ (at 5ms intervals) in a period of 50Hz. The segment turns ON when the difference in voltage is $\pm V_{DD}$ between these terminals and LCD1~LCD23.
6	COM1	
7	$V_{DD}$	Power supply terminal of device. Voltage of $5V \pm 10\%$ is supplied during operation of device. To hold the internal data memory (RAM), the voltage can be decreased to 2.5V. <b>Note:</b> Pins 7 and 33 are connected inside the chip. It is unnecessary to supply voltage to the pins.
33	$V_{DD}$	
8	FM	Input is local oscillator output (VCO) in a range of 10~130MHz (0.3Vp-p, min.). There are 1/2 fixed frequency division prescaler and 2-step (1/32, 1/33) prescaler internally. Therefore, when deciding the frequency dividing value of programmable divider, it must be decided from the frequency obtained by halving the local oscillator output (VCO).
9	AM	Input is local oscillator output (VCO) in a range of 0.5~20MHz (0.1Vp-p, min.). When the mode is shifted to FM, the AM terminal voltage automatically becomes the supply voltage of device.
10	GND	Ground terminal.
11	E01	When the divided oscillator frequency is higher than the standard frequency, H-level output is delivered from these terminals. When it is lower, L-level (0V) output is delivered. When they coincide, it results in floating.
12	E02	
13	CE	Device selection signal input terminal. The signal level should be high when the device is operated, and low when not operated. With this terminal shifted to low level, LCD (liquid crystal display) turns off and the memory is held.
14	NC	Not used in this unit.
15	X1	Connecting terminal for crystal oscillator. The crystal connected is 4.5MHz.
16	X2	
17	A3 (SD)	Inputs high signal when broadcast is received during auto tuning in the radio mode and low signal at all other times.
18	A2	Outputs high signal when ambience switch is pressed and turns on Q18.

Pin No.	Mark	Description of terminal
19	A1	——
20	A0	——
21 } 24	K3 } K0	Input terminal for key return signal from switch matrix.
25 } 28	B3 } B0	Output terminal for key scan signal to switch matrix.
29	C3	Output METAL-Dx/Lo
30	C2	Outputs switching signal for FM/AM bands. When high signal is output, FM demodulation circuit operates and FM mode is set.
31	C1	Outputs muting signal. Normally high; low during muting.
32	CO	Not used in this unit.
33	Vcc	+5V terminal.

## ELECTRICAL PARTS LIST

Numbering System of Resistor

Example ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value (100Ω)
ERX	2	AN	J	2R2
Type	Wattage	Shape	Tolerance	Value (2.2Ω)

Resistor Type	Wattage	Tolerance
ERD: Carbon	10 : 1/8 W	J : ±5%
ERG: Metal Film	12 : 1/2 W	
ERX: Metal Film	25 : 1/4 W	
ERQ: Fuse Type Metal	1 : 1 W	
RRD: Carbon (Chip Type)	18 : 1/8 W	

Numbering System of Capacitor

Example ECKD	1H	102	Z	F
Type	Voltage	Value (1000 pF)	Tolerance	Peculiarity
ECEA	50	M	R47	
Type	Voltage	Peculiarity	Value (0.47 μF)	

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
ECEA: Electrolytic	0J : 6.3 V	2H : 500 V DC	C : ±0.25 pF
ECCD: Ceramic	1A : 10 V	1 : 100 V	J : ±5%
ECKD: Ceramic	1C : 16 V	DKC : 400 V AC	K : ±10%
ECQM: Polyester	1E : 25 V		Z : +80%, -20%
ECQP: Polypropylene	1H : 50 V		P : +100%, -0%
	1V : 35 V		
	50 : 50 V		
ECET: Electrolytic			
ECEA□□□□: Non Polar Electrolytic	25 : 25 V		
QCU □: Ceramic (Chip Type)	16 : 16 V		
ECUX: Ceramic (Chip Type)			

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
<b>INTEGRATED CIRCUITS</b>			<b>DIODES &amp; RECTIFIERS</b>			<b>TRANSFORMERS</b>		
IC 1	LA1170	Integrated Circuit	D 1, 2, 3	RVD1SV103	Diode	T 1	RLI4B554	I.F. Transformer
IC 2	RVILA1140	Integrated Circuit	D 4, 5	MA56	Diode	T 2	RLI4A23	IFT, FM
IC 3	RVISTK2110D	Integrated Circuit	D 7, 9, 10, 16, 17, 18, 34, 35, 37, 50, 51, 74	MA165	Diode, Si	T 3	RLI4A24	IFT, FM
IC 4	RVILA3375	Integrated Circuit	D 8	RVDKB265G	Diode	T 301, 303	RLI2A16	AM NB, IFT, FM
IC 5	RVITC4011BP	Integrated Circuit	D 11, 39, 46	MA1056	Diode	T 302	RLI2A17	IFT, AM
IC 6	RVITA78L008P	Integrated Circuit	D 12, 13, 20, 21, 23, 25, 30, 31, 38, 40, 45	MA151WK	Chip Diode	<b>TRIMMER CONDENSERS</b>		
IC 7	RVIM51203L	Integrated Circuit	D 14, 15, 33, 36, 42	MA151WA	Chip Diode	CT 1, 2	RCVTZ220F	Trimmer Capacitor
IC 8	RVUUPC1228H	Integrated Circuit	D 22, 27, 28, 29, 41	MA153	Diode	CT 3	RCVTZ11F	Trimmer Capacitor
IC 9	RVIBA6133	Integrated Circuit	D 32, 43	MA161	Diode	CT 301, 303	RCVTZ20F	Trimmer Capacitor
IC 10	RVILM1131C	Integrated Circuit	D 44	MA1120	Diode	CT 302	RCVCTZ51F	Trimmer Capacitor
IC 11	RVITA7230P	Integrated Circuit	D 47	MA1100	Diode	<b>VARIABLE RESISTORS</b>		
IC 301	RVUUPC1215VE	Integrated Circuit	D 49	RVDRD6R2EB	Diode	VR 1	EVND4AA00B14	Variable Resistor, Preset, 10kΩ (B)
IC 302	RVIM57171L	Integrated Circuit	D 301	MA153	Diode	VR 2	EVNM4AA00B14	Variable Resistor, Preset, 10kΩ (B)
IC 401	UPD1708Q555	Integrated Circuit	D 303, 304, 309, 501	MA165	Diode, Si	VR 3	EVURV3255B15	Variable Resistor, Preset, 100kΩ (B) (include S1)
IC 402	RVITC4030BP	Integrated Circuit	D 305	RVDKB265G	Diode	VR 4	EVURW3255B24	Variable Resistor, Preset, 20kΩ (B) (include S2)
IC 501	RVUUPC1228H	Integrated Circuit	D 306, 307, 308	RVD1SV149	Diode	VR 5	EVUSKAP15D24	Variable Resistor, Preset, 20kΩ (D)
IC 502	RVUUPC78L08	Integrated Circuit	D 401, 402, 403, 404, 406	MA165	Diode, Si	VR 501, 502	RVNCC24B1	Variable Resistor
IC 701	AN6248	Integrated Circuit	D 405	MA151WA	Chip Diode	<b>RESONATOR</b>		
IC 702, 703	DM106	Integrated Circuit	D 502	MA1068M	Diode	X 401	RVCA4500N2N	Crystal
<b>TRANSISTORS</b>			D 503	MA1082M	Diode	<b>CERAMIC FILTERS</b>		
Q 1	3SK114Y	Transistor	D 601, 602	SM112	Rectifier	CF 1	RVFSFE107MSR	Ceramic Filter
Q 2, 4, 5, 10, 11, 12, 13, 15, 16, 19, 23, 34, 36, 37, 41, 44	2SD601R	Transistor	D 701	MA1091M	Diode	CF 2	RVFSFE107MAR	Ceramic Filter
Q 6, 7	2SD601S	Transistor	D 702, 705	MA151WK	Chip Diode	CF 301	RVFSFP450H	Ceramic Filter
Q 8, 9	2SD601Q	Transistor	D 703, 704	SM112	Rectifier	CF 302	RVFCFM2450Z	Ceramic Filter
Q 14, 17, 26, 27, 28, 29, 30, 31, 32, 33	2SB709	Transistor	<b>COILS</b>			<b>PILOT LAMP</b>		
Q 18	2SK180K6	Transistor	L 1	RL04N135	Coil, FM Antenna	PL 1	XANR13733	Neon Lamp
Q 38, 43	2SA683R	Transistor	L 2, 3	RLQZB2R2K	Coil, Choke	<b>SWITCHES</b>		
Q 40	2SA852K2	Transistor, Si 160MH 0.6W	L 4	RL04N170	Coil, FM Antenna	S 3, 4, 5, 6, 7, 8, 9, 10	EVQSQ04K	Switch, PROGRAM, M/ME, BAND, AMB, SENS/DOLBY
Q 42	2SC1383Q	Transistor	L 5	RL04N98	Coil, FM Antenna	S 701, 702	ESB843	Switch, FF/REN
Q 45	2SC2404C	Transistor	L 6	RLQZB470K	Coil, Choke	S 703	RSS2C02Z	Switch, Tape
Q 46, 751, 752	2SC1685-Q	Transistor	L 301, 304	RLA2A3	Coil, AM Antenna	S 705	RFA36Z	Switch, Muting
Q 301	2SK184BL	Transistor	L 302	RLQZB102K	Coil Choke	S 706	RFA37Z	Switch, Head
Q 302	2SC2295B	Transistor, Si 250MH 0.1W	L 303	RL02A8	Coil, AM Oscillator			
Q 303	2SC1359B	Transistor	L 601, 602	RLT6D1A	Coil			
Q 401	2SK180K4	Transistor, Field Effect						
Q 402	2SC1823L6A	Transistor, Si 300MH 0.15W						
Q 403, 404	2SD601R	Transistor						
Q 501, 502, 503, 504	2SD601R	Transistor						
Q 701, 703, 704, 705, 706, 707, 710, 711, 712	2SD601R	Transistor						
Q 702	2SC2001K1	Transistor						
Q 708, 709	2SD1253P	Transistor						

Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.
<b>CAPACITORS</b>		<b>CAPACITORS</b>		<b>CAPACITORS</b>		<b>CAPACITORS</b>	
C 1, 2, 4, 8, 9, 10, 15	RCUX1H102MD	C 31, 76, 85, 86, 138, 139	ECEA1HK4R7	C 151, 155	ECSF1VE104	C 401	RCUX1H102MD
C 3	RCUX1H270KC	C 32, 128, 129	ECEA1HKR33	C 161	ECEA0JK470	C 402	ECQV1H474JZ
C 5, 11, 81, 83, 89, 107, 109, 119, 121, 124, 125, 134, 135	ECEA1CK100	C 33, 42, 80	ECEA1CK470	C 301, 303, 305, 310, 311, 320, 324, 325, 336, 511, 512, 514	RCUX1E223ZF	C 403, 404, 405, 413, 420	RCUX1H103ZF
C 6, 16	RCUX1H150KC	C 34, 44	RCUX1H101K	C 302	RCUX1H471KB	C 406	ECEA1HK0R1
C 12, 13, 20, 25, 40, 68, 69, 88, 103, 105, 110, 115, 116, 164	RCUX1H103ZF	C 36, 39, 142, 160	RCUX1E223ZF	C 304	RCUX1H101K	C 407, 408	RCUX1H220KC
C 14, 19	RCUX1H271K	C 41, 102, 149	ECEA1AK220	C 306, 322, 504, 508, 515	ECEA1CK100	C 409	ECEA1CK100
C 17	RCUX1H390KC	C 45	ECEA1CN100S	C 307, 317, 334	ECUX1E104MD	C 410, 411, 412	RCUX1H221K
C 18	RCUX1H180KC	C 47	RCUX1H332MD	C 308, 327, 505	ECEA1CK470	C 414	ECKD1H103ZF
C 22, 46, 108, 114, 120, 130, 131	ECUX1E473MD	C 48, 141, 146, 154	ECUX1E104MD	C 309, 323, 338, 340, 350	RCUX1E103MD	C 421	ECEA0JK221
C 23	ECUX1H101JR	C 51	ECOP2A102JZ	C 312, 326, 519, 520	ECEA1EK4R7	C 422	ECEA0JU102
C 24	ECEA1AK470	C 53, 106, 147, 150	ECEA1HK2R2	C 313	ECKD1H103ZF	C 424	ECEA1HK010
C 26, 52	RCUX1E333ZF	C 54, 65, 66, 71, 72, 73, 74	ECEA1HK3R3	C 314	RCUX1H102MD	C 425	ECUX1E473MD
C 27, 37, 38, 43, 59, 60, 61, 62, 63, 64, 75, 78, 79, 87, 143, 156	ECEA1HK010	C 56, 58	ECSF1CE105	C 315	RCUX1H103ZF	C 426	ECCD1H820K
C 28	RCUX1H470KC	C 67	ECEA0JK101	C 316	RCUX1H220KC	C 501, 509	ECSF1CD224
C 29, 30, 35, 50, 55, 57, 82	ECUX1H223MD	C 77, 117	ECEA1CU101	C 318	ECOP2A471JZ	C 502, 506	ECEA0JK330
		C 84	ECEA1AK330	C 319	ECEA1HKR47	C 510, 521	RCUX1H152MD
		C 98, 99, 111, 126, 127	ECEA1HK0R1	C 321, 518	ECEA1AK220	C 513	ECEA1AU221
		C 104	ECEA1AU101	C 328	RCUX1E333ZF	C 602, 603	ECUX1E104MD
		C 112	RCUX1H181K	C 329, 516, 517	ECEA1HK010	C 607, 615	ECEA1CU471
		C 113	ECEA1HKR22	C 330	RCUX1H472MD	C 701	ECEA1HU010
		C 118	RCUX1H560KC	C 332, 503, 507	RCUX1H682MD	C 702	ECEA1AU470
		C 122, 145, 153	ECEA1AU221	C 342	RCUX1H332MD	C 703	ECQV1H334JZ
		C 123	ECEA1AU471	C 344	ECUX1H223MD	C 704, 705	ECEA1AK470
		C 136, 137	ECUX1E333MD	C 346	ECUX1E473MD	C 706, 707	ECUX1E473MD
		C 144	ECEA1CU471	C 348	ECEA1HK0R1	C 708	ECUX1E104MD
		C 148, 152	RCUX1H472MD			C 709	RCUX1H682MD

Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.
<b>RESISTORS</b>							
R 1, 2	ERJ6GCJ681	R 30, 59, 60, 154, 164, 165, 174, 175, 181, 202	ERJ6GCJ332	R 304	ERJ6GCJ105	R 514, 515, 521	ERJ6GCJ272
R 3, 14, 18, 51, 52, 82, 83, 91, 93, 97, 98, 121, 122, 127, 128, 129, 132, 134, 135, 137, 138, 139, 140, 141, 188	ERJ6GCJ104	R 31	ERD25FJ103	R 305	ERJ6GCJ270	R 523	ERJ6GCJ333
R 4, 104, 120, 200	ERJ6GCJ224	R 33, 75	ERJ6GCJ821	R 306	ERJ6GCJ182	R 524	ERJ6GCJ331
R 5, 172, 173	ERJ6GCJ274	R 34, 44	ERJ6GCJ123	R 308	ERJ6GCJ330	R 525	ERJ6GCJ881
R 6, 15, 27, 35, 86, 87, 88, 89, 102, 103, 118, 124, 133, 153, 176, 177, 184	ERJ6GCJ473	R 36, 39, 47, 48, 56, 67, 68, 73, 74, 80, 81, 84, 85, 92, 95, 106, 136	ERJ6GCJ223	R 310, 330, 333	ERJ6GCJ470	R 530	ERJ6GCJ561
R 7, 156	ERJ6GCJ334	R 37, 159, 189, 196	ERJ6GCJ222	R 311, 312, 314, 522	ERJ6GCJ104	R 702, 712, 714	ERJ6GCJ224
R 8	ERJ6GCJ181	R 38, 71, 72, 183	ERJ6GCJ333	R 313, 317, 319	ERJ6GCJ103	R 703, 720, 722	ERJ6GCJ222
R 9, 10	ERJ6GCJ470	R 42, 96, 152	ERJ6GCJ153	R 315	ERJ6GCJ101	R 704	ERJ6GCJ333
R 11, 18, 21, 32, 40, 99, 105	ERJ6GCJ101	R 45, 46, 53, 54, 151	ERJ6GCJ392	R 316, 527, 528	ERJ6GCJ473	R 705, 713	ERJ6GCJ104
R 12, 22, 26, 61, 82, 85, 86, 100, 101, 119, 157, 158, 187	ERJ6GCJ102	R 49, 50, 94	ERJ6GCJ563	R 318	ERJ6GCJ152	R 706	ERJ6GCJ471
R 17, 28, 55, 76, 77, 145, 146, 195	ERJ6GCJ103	R 57, 58, 144, 203	ERJ6GCJ105	R 322, 324, 326, 526, 529	ERJ6GCJ222	R 707, 710	ERJ6GCJ472
R 19, 23, 130, 131	ERJ6GCJ331	R 63, 64	ERJ6GCJ154	R 323, 328	ERJ6GCJ153	R 708, 709	ERJ6GCJ473
R 20, 142	ERJ6GCJ471	R 76, 79, 186	ERJ6GCJ273	R 325	ERJ6GCJ151	R 711	ERJ6GCJ223
R 24, 43	ERJ6GCJ822	R 147	ERJ6GCJ151	R 332	ERJ6GCJ683	R 715	ERJ6GCJ122
R 25	ERJ6GCJ823	R 148	ERJ6GCJ271	R 334	ERJ6GCJ183	R 716, 718	ERJ6GCJ103
R 29, 41, 69, 70, 123, 125, 178, 179	ERJ6GCJ472	R 149, 150	ERJ6GCJ394	R 401	ERJ6GCJ682	R 717	RRD18XJ103
		R 155, 190	ERJ6GCJ561	R 402	ERJ6GCJ222	R 719	RRD18XJ122
		R 166, 167	ERJ6GCJ562	R 403	ERJ6GCJ472	R 721, 724	ERJ6GCJ102
		R 168, 169	ERJ6GCJ122	R 404, 414	ERJ6GCJ473	R 723, 725	RRD18XJ102
		R 170, 171	ERJ6GCJ683	R 405, 406, 407, 408, 409, 410, 416	ERJ6GCJ104	<b>CHIP JUMPER</b>	
		R 182	ERJ6GCJ682	R 412	ERJ6GCJ331	RJ 1, 2, 3, 4, 5	RRD18XK000
		R 191, 192, 193, 194	ERJ6GCJ272	R 413	ERJ6GCJ102	RJ 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	ERJ6GCJ000
		R 197, 198	ERJ6GCJ221	R 415, 421	ERJ6GCJ823	RJ 301, 302, 303, 304, 305, 306, 307, 503, 504	ERJ6GCJ000
		R 201	ERJ6GCJ183	R 417, 419	ERJ6GCJ223	RJ 401, 402	ERJ6GCJ000
		R 206	ERDS2TJ104	R 418	ERJ6GCJ333	RJ 501, 502, 601	RRD18XK000
		R 301, 307, 309, 327, 505, 511	ERJ6GCJ474	R 420	ERJ6GCJ101	RJ 701, 702, 703, 704, 705, 706, 707, 708, 709, 712	ERJ6GCJ000
		R 302, 320, 321, 516, 518	ERJ6GCJ332	R 422, 423, 425, 426	ERJ6GCJ393	RJ 707, 710, 711	RRD18XK000
		R 303	ERDS2TJ332	R 424	ERJ6GCJ683		
				R 427	ERJ6GCJ470		
				R 428	ERJ6GCJ881		
				R 501, 513	ERJ6GCJ274		
				R 502, 509	ERJ6GCJ224		
				R 503, 508, 517	ERJ6GCJ334		
				R 504, 510	ERJ6GCJ121		
				R 506, 512, 520, 519	ERJ6GCJ223		
				R 507	ERDS2TJ101		

■ PARTS NO. FUNCTION NAME AND ZONE NO. SCHEMATIC DIAGRAM (MAIN CIRCUIT)

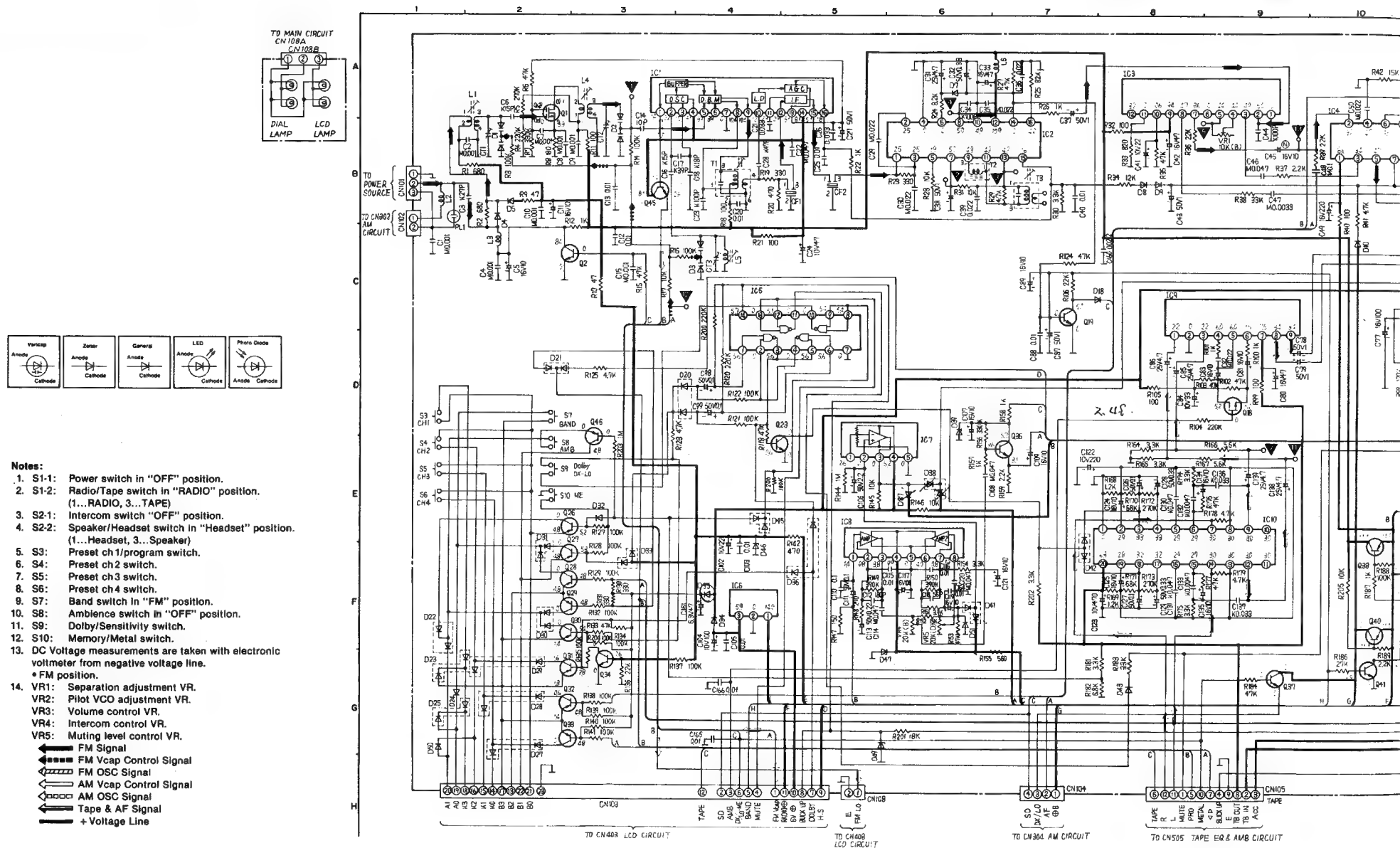
Ref. No.	Zone	Part No.	Function Name	Ref. No.	Zone	Part No.	Function Name
IC1	A · 4	LA1170	FM MIX & OSC	Q1	A · 2	3SK114Y	FM RF AMP
IC2	B · 6	RVILA1140	FM IF & DET	Q2	C · 2	2SD601R	SWITCHING
IC3	A · 8	RVISTK2110D	FM NOISE BRANKER	Q4	B · 12	2SD601R	SWITCHING
IC4	B · 10	RVILA3375	FM STEREO MPX	Q5	C · 12	2SD601R	SWITCHING
IC5	D · 4	RVITC4011BP	PRE SCALOR	Q6	A · 13	2SD601S	PRE AMP
IC6	F · 4	RVITA78L006P	REGULATOR	Q7	B · 13	2SD601S	PRE AMP
IC7	D · 5	RVIM51203L	MUTE CONTROLLER	Q8	A · 13	2SD601Q	BUFFER AMP
IC8	E · 5	RVIUPC1228H	DUAL OPERATIONAL AMP	Q9	B · 13	2SD601Q	BUFFER AMP
IC9	C · 9	RVIBA6133	DUAL POWER AMP	Q10	B · 14	2SD601R	SWITCHING
IC10	E · 8	RVILM1131C	AMBIENCE	Q11	C · 14	2SD601R	SWITCHING
IC11	E · 13	RVITA7230P	DOLBY NR	Q12	D · 14	2SD601R	SWITCHING

Ref. No.	Zone	Part No.	Function Name	Ref. No.	Zone	Part No.	Function Name
Q13	D · 14	2SD601R	SWITCHING	D12	D · 13	MA151WK	SWITCHING
Q14	D · 11	2SB709R (2SB709)	SWITCHING	D13	D · 13	MA151WK	SWITCHING
Q15	D · 11	2SD601R	SWITCHING	D14	D · 12	MA151WA	SWITCHING
Q16	D · 11	2SD601R	SWITCHING	D15	D · 12	MA151WA	SWITCHING
Q17	D · 11	2SB709R (2SB709)	SWITCHING	D16	E · 12	MA165	SWITCHING
Q18	D · 9	2SK160K5	SWITCHING	D17	C · 11	MA165	SWITCHING
Q19	C · 7	2SD601R	SWITCHING	D18	C · 8	MA165	SWITCHING
Q23	D · 5	2SD601R	SWITCHING	D20	D · 4	MA151WK	SWITCHING
Q26	E · 2	2SB709R (2SB709)	SWITCHING	D21	D · 2	MA151WK	SWITCHING
Q27	F · 2	2SB709R (2SB709)	SWITCHING	D22	F · 1	MA153	SWITCHING
Q28	F · 2	2SB709R (2SB709)	SWITCHING	D23	G · 1	MA151WK	SWITCHING
Q29	F · 2	2SB709R (2SB709)	SWITCHING	D24	G · 1	MA165	SWITCHING
Q30	F · 2	2SB709R (2SB709)	SWITCHING	D25	G · 1	MA151WK	SWITCHING
Q31	G · 2	2SB709R (2SB709)	SWITCHING	D27	G · 2	MA153	SWITCHING
Q32	G · 2	2SB709R (2SB709)	SWITCHING	D28	G · 2	MA153	SWITCHING
Q33	G · 2	2SB709R (2SB709)	SWITCHING	D29	G · 2	MA153	SWITCHING
Q34	G · 3	2SD601R	SWITCHING	D30	F · 2	MA151WK	SWITCHING
Q36	E · 7	2SD601R	SWITCHING	D31	F · 2	MA151WK	SWITCHING
Q37	G · 9	2SD601R	SWITCHING	D32	E · 3	MA161	SWITCHING
Q38	F · 10	2SA684-RNC	SWITCHING	D33	F · 3	MA151WA	SWITCHING
Q40	F · 10	2SA952K2	SWITCHING	D34	F · 4	MA165	SWITCHING
Q41	G · 10	2SD601R	SWITCHING	D35	F · 4	MA165	SWITCHING
Q42	F · 10	2SC1383Q	REGULATOR	D36	F · 5	MA151WA	SWITCHING
Q43	F · 12	2SA684-RNC	SWITCHING	D37	E · 6	MA165	SWITCHING
Q44	F · 12	2SD601R	SWITCHING	D38	E · 6	MA151WK	SWITCHING
Q45	B · 3	2SC2404C	OSC BUFFER	D39	E · 6	MA1056	REGULATOR
Q46	D · 3	2SC1684R	SWITCHING	D40	F · 11	MA151WK	SWITCHING
D1	B · 2	RVD1SV103	FM TUNING	D41	F · 6	MA153	SWITCHING
D2	B · 3	RVD1SV103	FM TUNING	D42	F · 7	MA151WA	SWITCHING
D3	C · 4	RVD1SV103	FM TUNING	D43	G · 7	MA161	SWITCHING
D4	B · 2	MA56	SWITCHING	D44	F · 10	MA1120	REGULATOR
D5	B · 2	MA56	SWITCHING	D45	E · 4	MA151WK	SWITCHING
D6	C · 5	MA1082M	REGULATOR	D46	F · 4	MA1056	SWITCHING
D7	A · 6	MA165	SWITCHING	D47	F · 5	MA1100	SWITCHING
D8	B · 8	RVDKB265G	SWITCHING	D49	H · 6	RVDRD6R2EB	REGULATOR
D9	B · 8	MA165	SWITCHING	D50	G · 1	MA165	SWITCHING
D10	C · 10	MA165	SWITCHING	D51	F · 6	MA165	SWITCHING
D11	A · 14	MA1056	REGULATOR	D74		MA165	

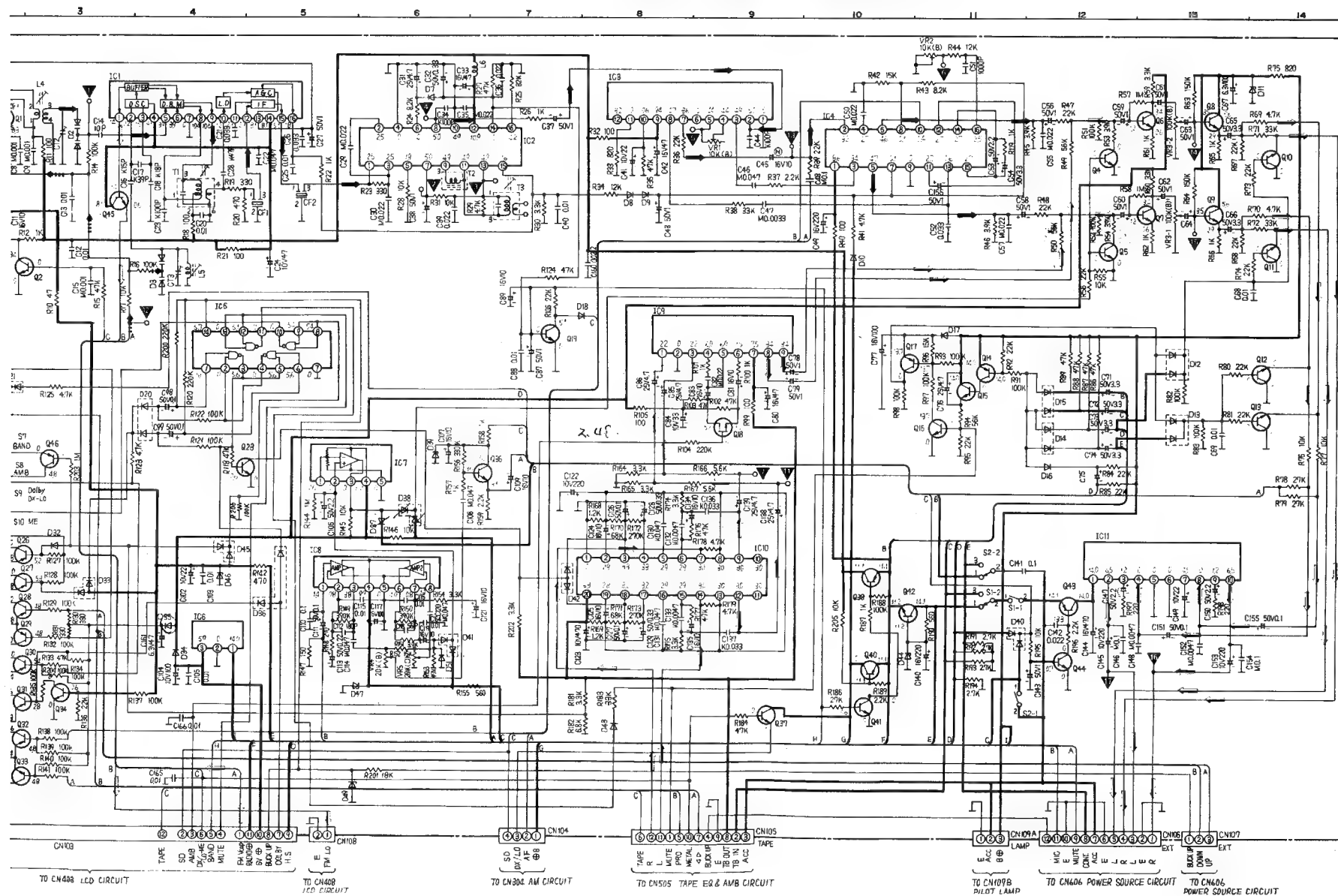
( ) ..... Supply Parts Number.



## SCHEMATIC DIAGRAM (MAIN)

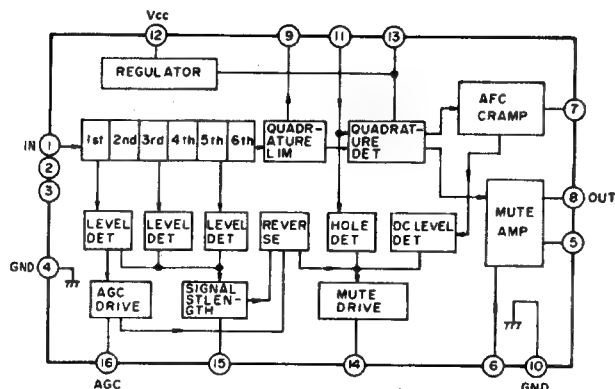


### SCHEMATIC DIAGRAM (MAIN)

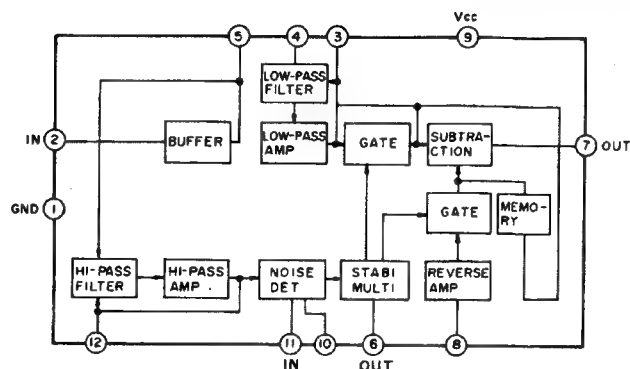


■ IC BLOCK DIAGRAM

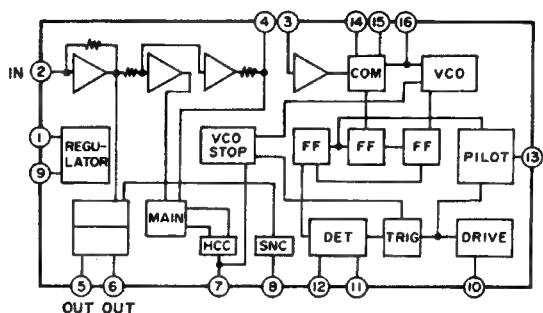
IC2 RVILA1140



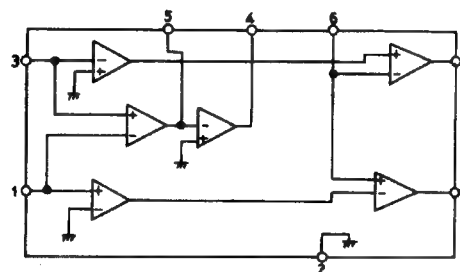
IC3 RVISTK2110D



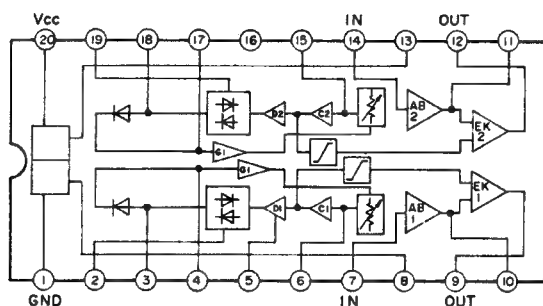
IC4 RVILA3375



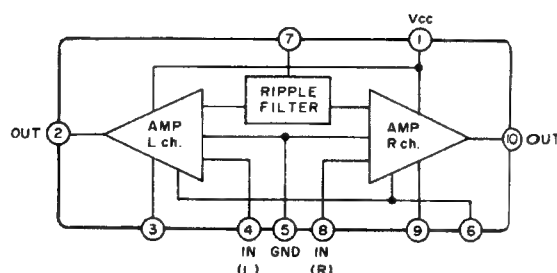
IC9 RVIBA6133



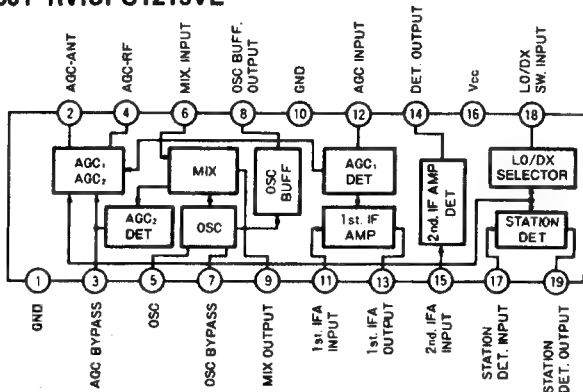
IC10 RVILM1131C



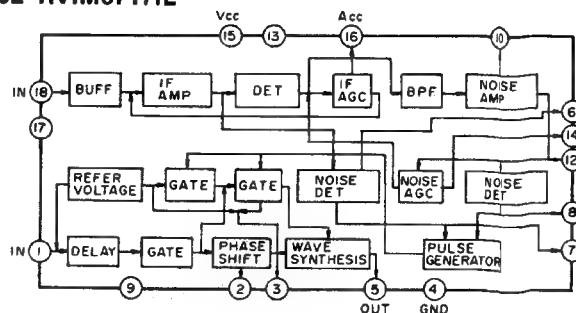
IC11 RVITA7230P



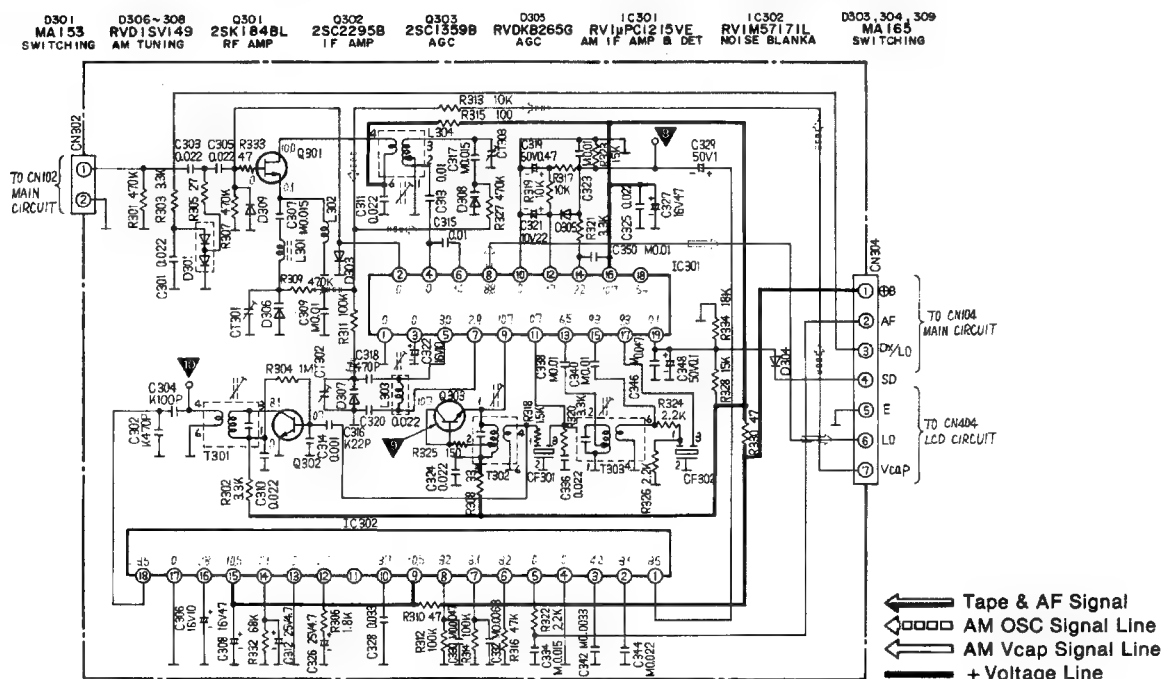
IC301 RVIUPC1215VE



IC302 RVIM5717IL



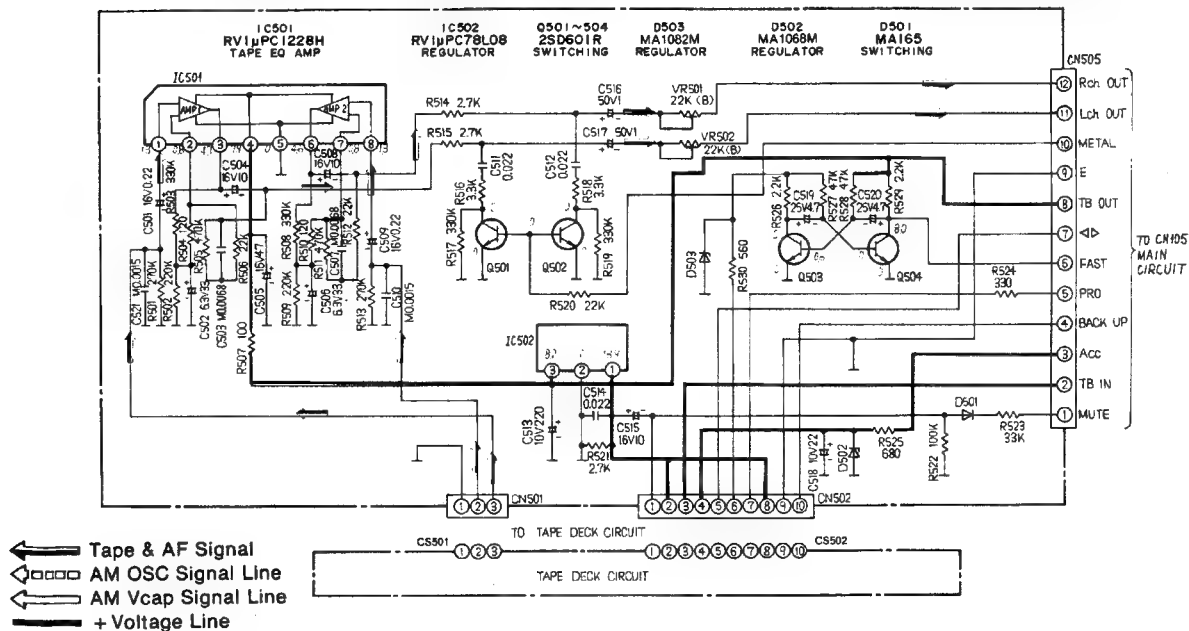
## SCHEMATIC DIAGRAM (AM)

**Note:**

DC voltage measurements are taken with electronic voltmeter from negative voltage line.

• AM position.

## SCHEMATIC DIAGRAM (TAPE EQ &amp; AMBIENCE)

**Note:**

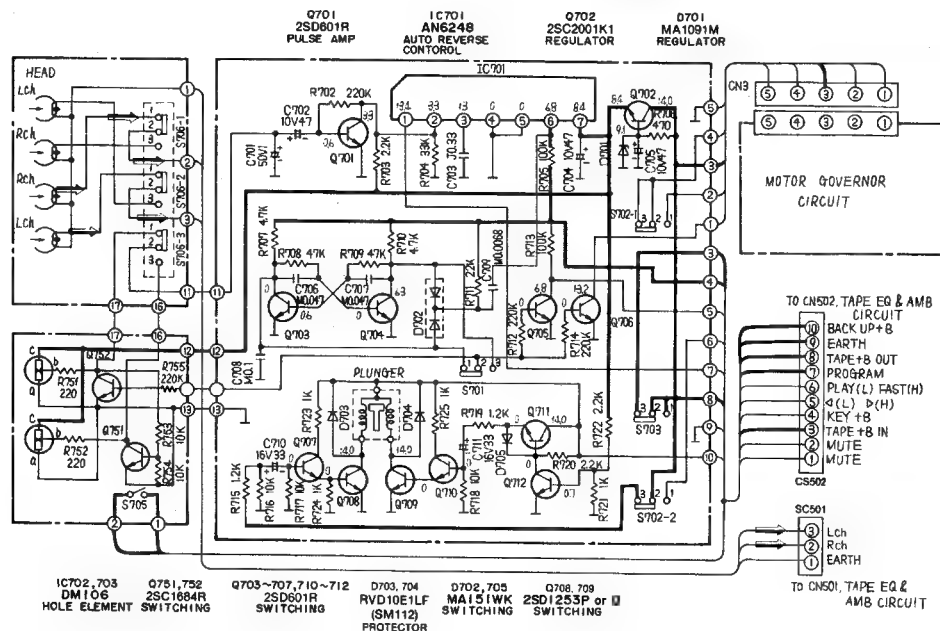
DC voltage measurements are taken with electronic voltmeter from negative voltage line.

• AM position.

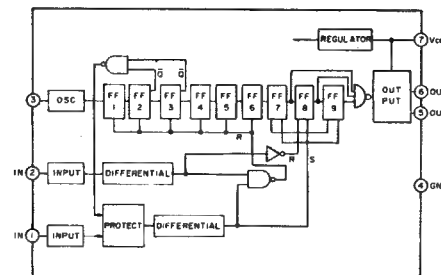
VR501: Dolby level (R) adjustment VR.

VR502: Dolby level (L) adjustment VR.

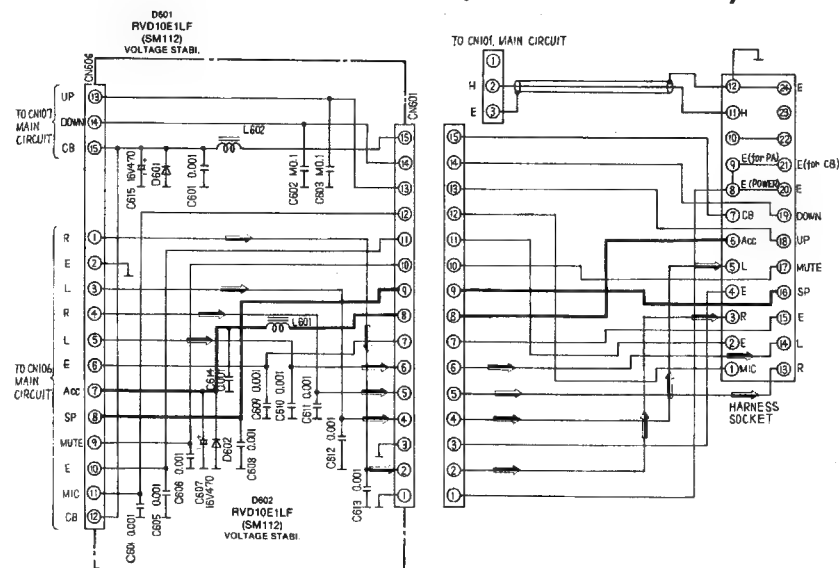
# SCHEMATIC DIAGRAM (TAPE DECK)



## IC701 AN6248



# SCHEMATIC DIAGRAM (POWER SOURCE)

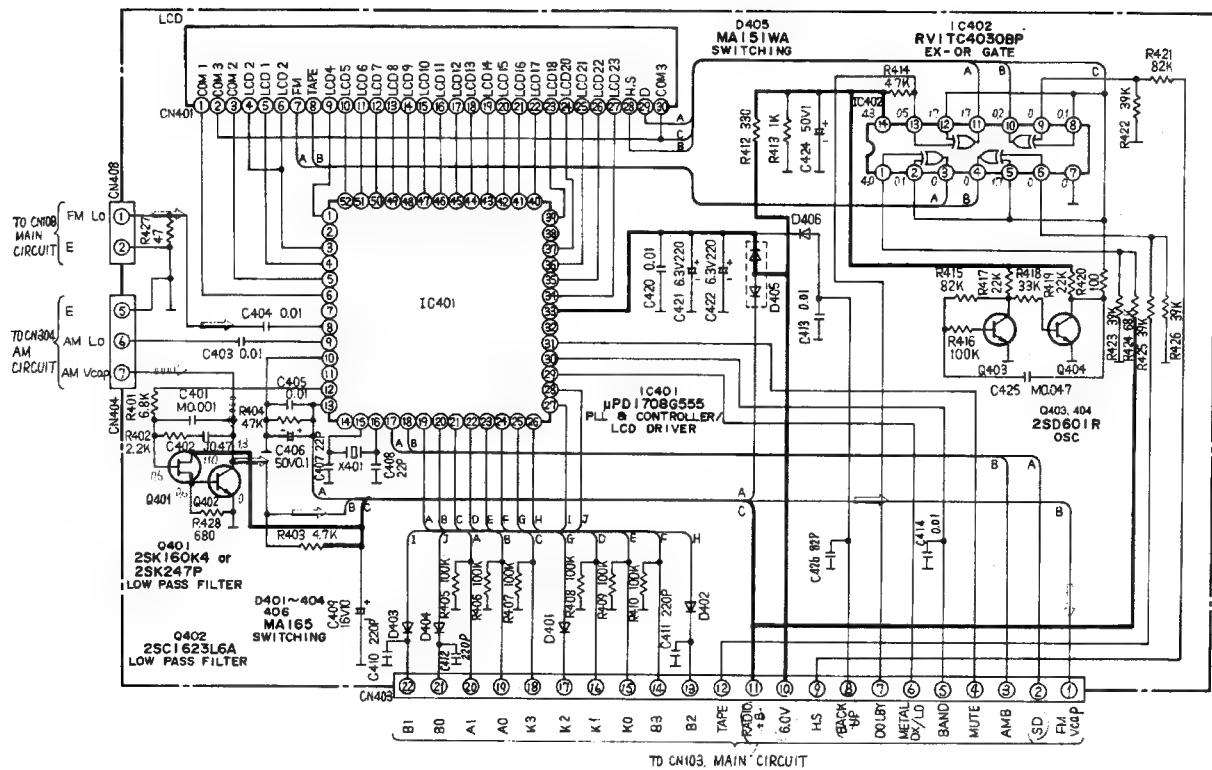


## Notes:

1. S701: Forward/Reverse switch in "Forward" position.
2. S702-1: Motor speed switch in "FAST" position.
3. S702-2: Plunger switch in "ON" position.
4. S703: Tape switch in "ON" position.
5. S705: Mute switch.
6. S706-1, S706-2: Head switch.
7. S706-3: Hole Element switch.
8. DC voltage measurements are taken with electronic voltmeter from negative voltage line.
9. \* Tape position.

← Tape & AF Signal  
— + Voltage Line

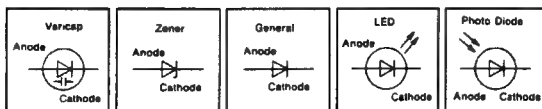
## SCHEMATIC DIAGRAM (LCD)

**Note:**


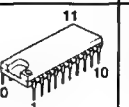
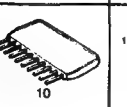

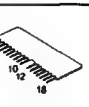
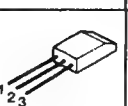
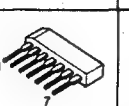
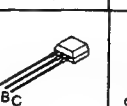
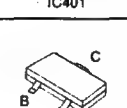
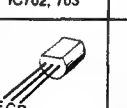
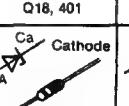
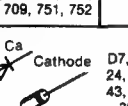
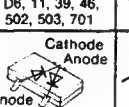
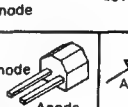
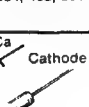
DC voltage measurements are taken with electronics voltmeter from negative voltage line.

- FM/Local/Headset position.

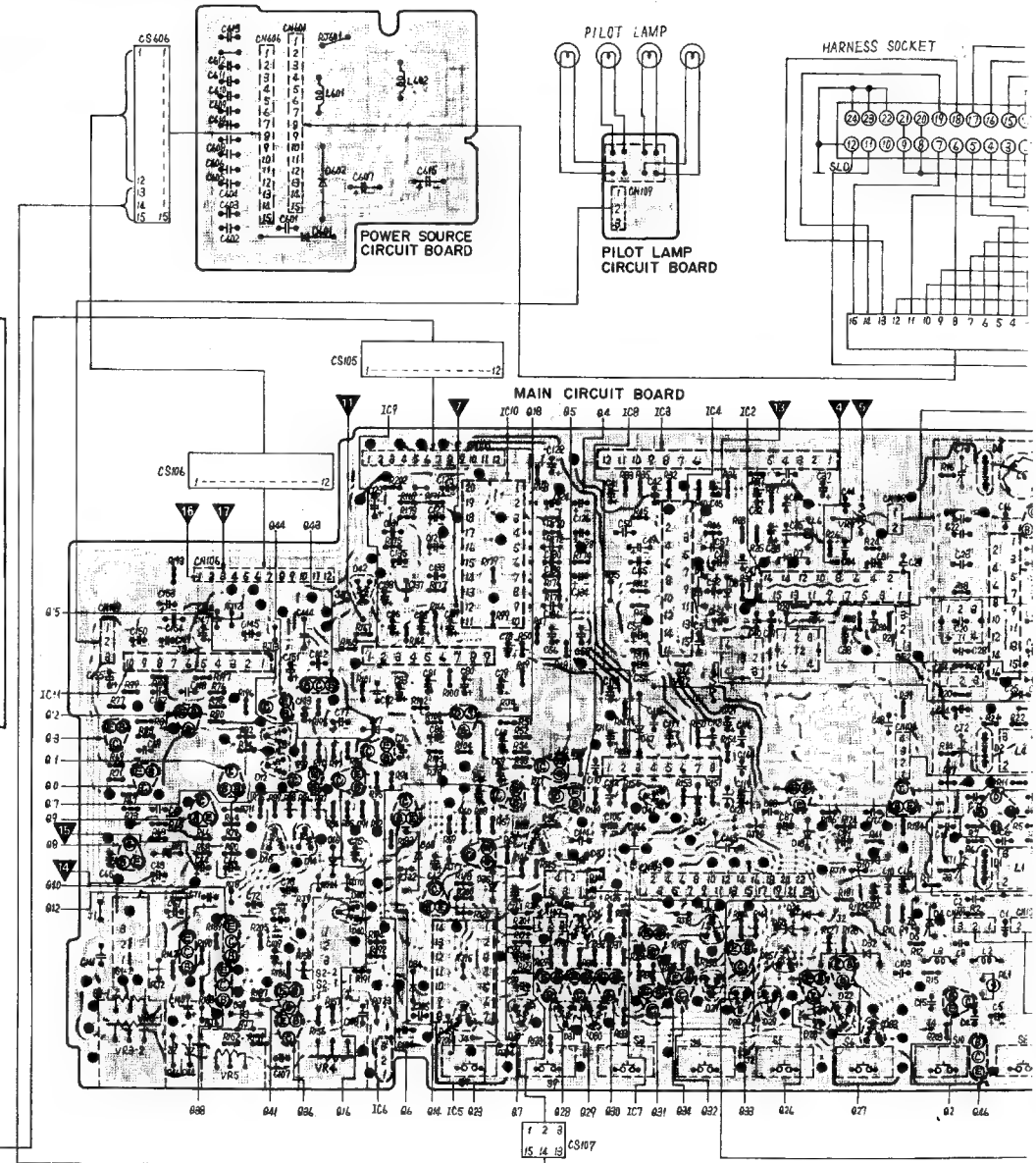
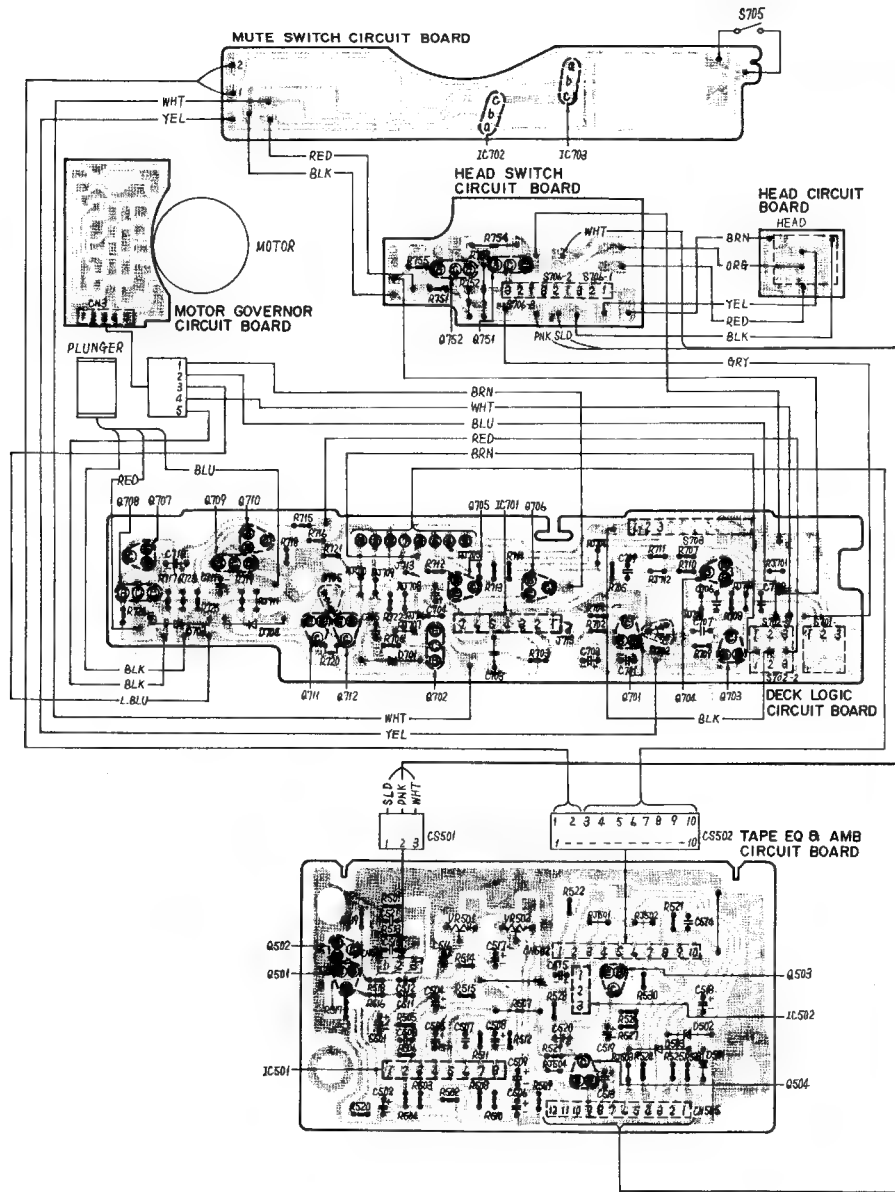
FM OSC Signal  
 AM Vcap Control Signal  
 AM OSC Signal  
 + Voltage Line



# TERMINATIONS

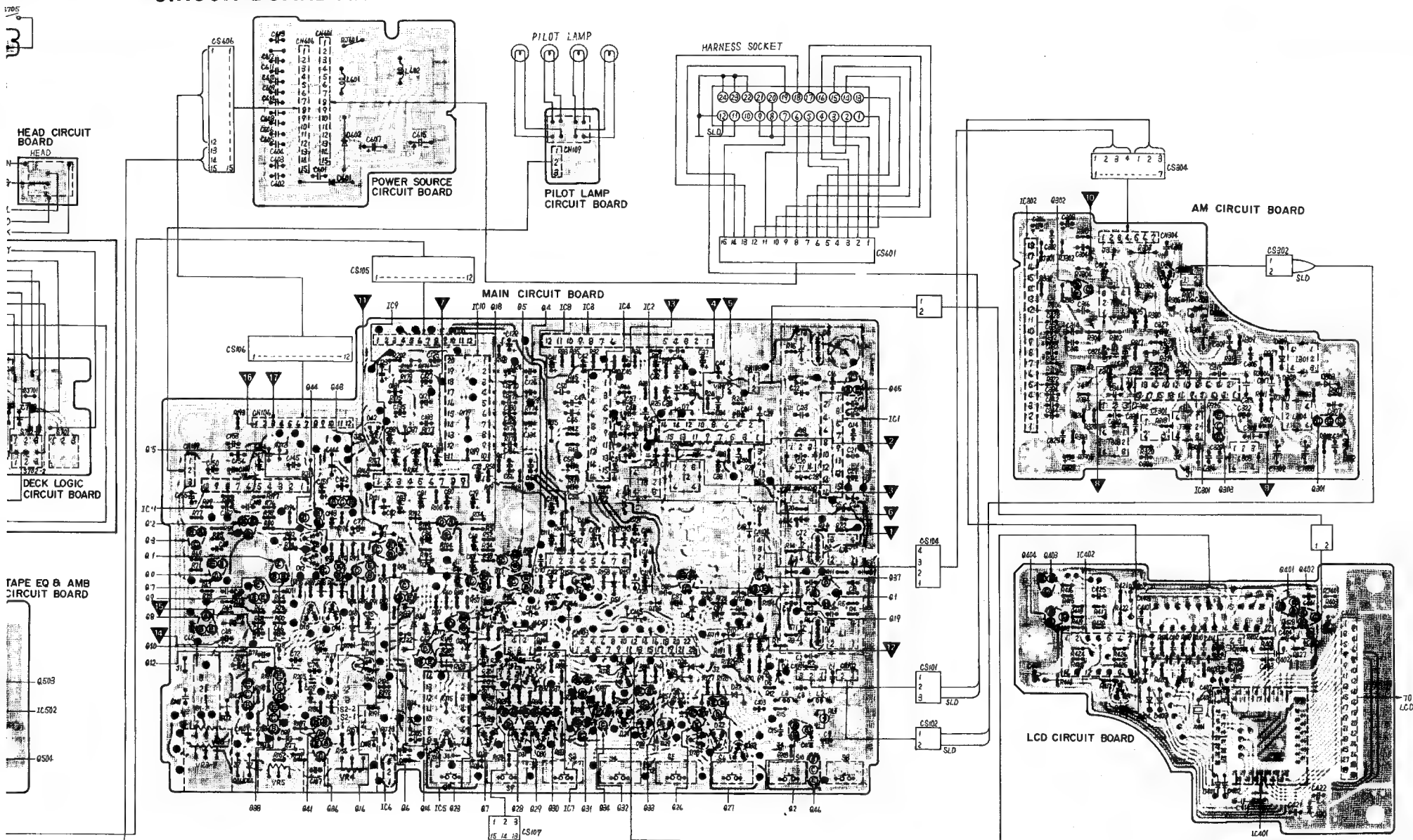
 IC1, 4	 IC2	 IC3	 IC51, 402	 IC6	 IC7
 IC8, 501	 IC9	 IC10	 IC11	 IC301	 IC302
 IC401	 IC502	 IC701	 IC702, 703	 Q1	
 Q2, 4~17, 19, 23, 26~34, 36, 37, 41, 44, 45, 302, 402~404, 501~504, 701, 703~707, 710~712	 Q18, 401	 Q38, 42, 43	 Q40, 46, 303, 702, 708, 709, 751, 752	 Q301	
 Anode Cathode Anode D1~3	 Cathode Anode D4, 5	 Ca Cathode Anode D6, 11, 39, 46, 502, 503, 701	 Ca Cathode Anode D8, 305	 Ca Cathode Anode D7, 9, 10, 16~18, 24, 32, 34, 35, 37, 43, 49, 50, 51, 74, 303, 304, 309, 401~404, 406, 501	
 Cathode Anode D12, 13, 20, 21, 23, 25, 30, 31, 38, 40, 45, 702, 705	 Anode Cathode Cathode Anode D14, 15, 33, 36, 42, 405	 Cathode Anode Anode Cathode D22, 27, 28, 29, 41, 301	 Ca Cathode Anode D44, 47	 Cathode Ca Anode D306~308	 Ca Cathode Anode D601, 602

## CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM



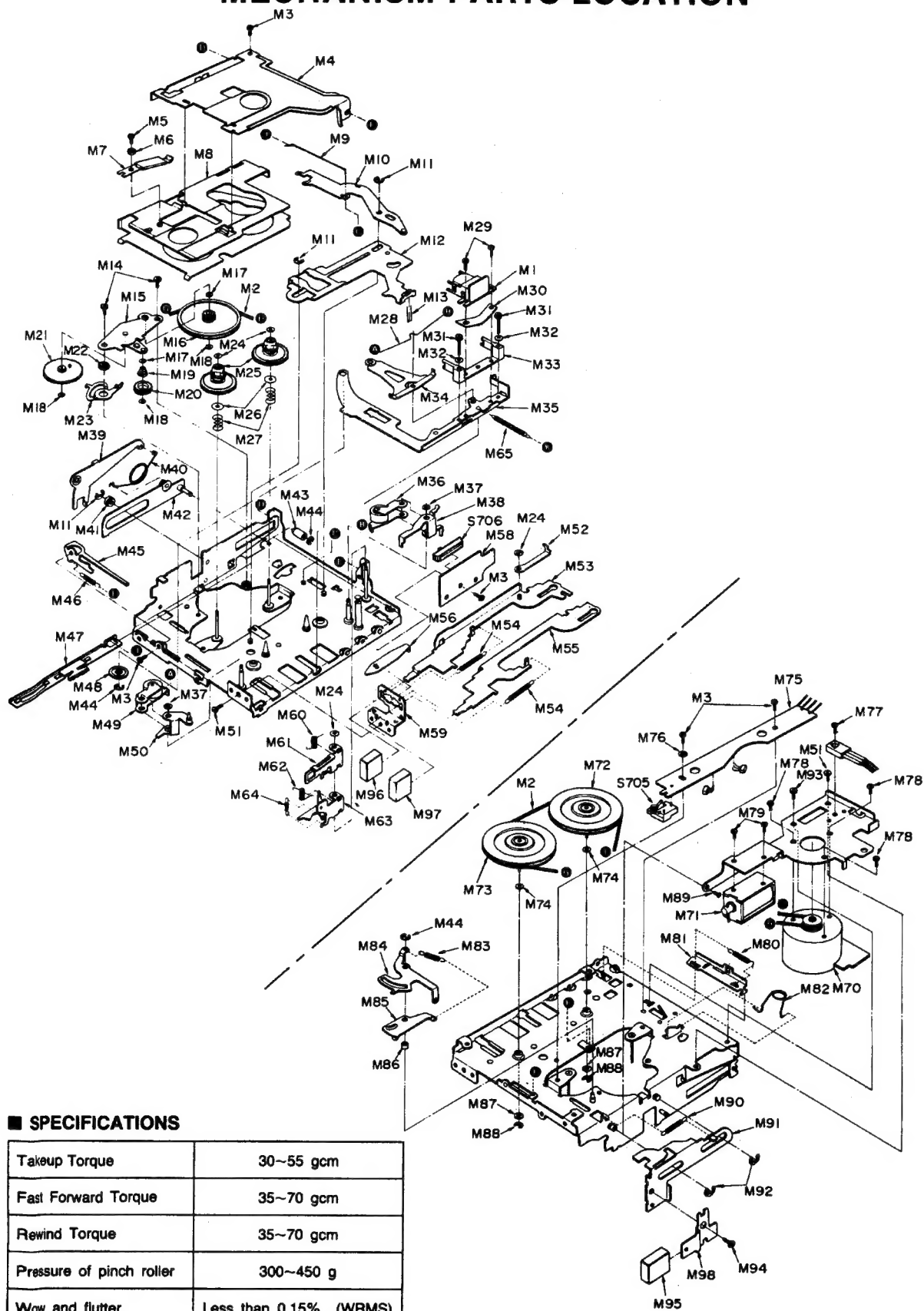


## CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM





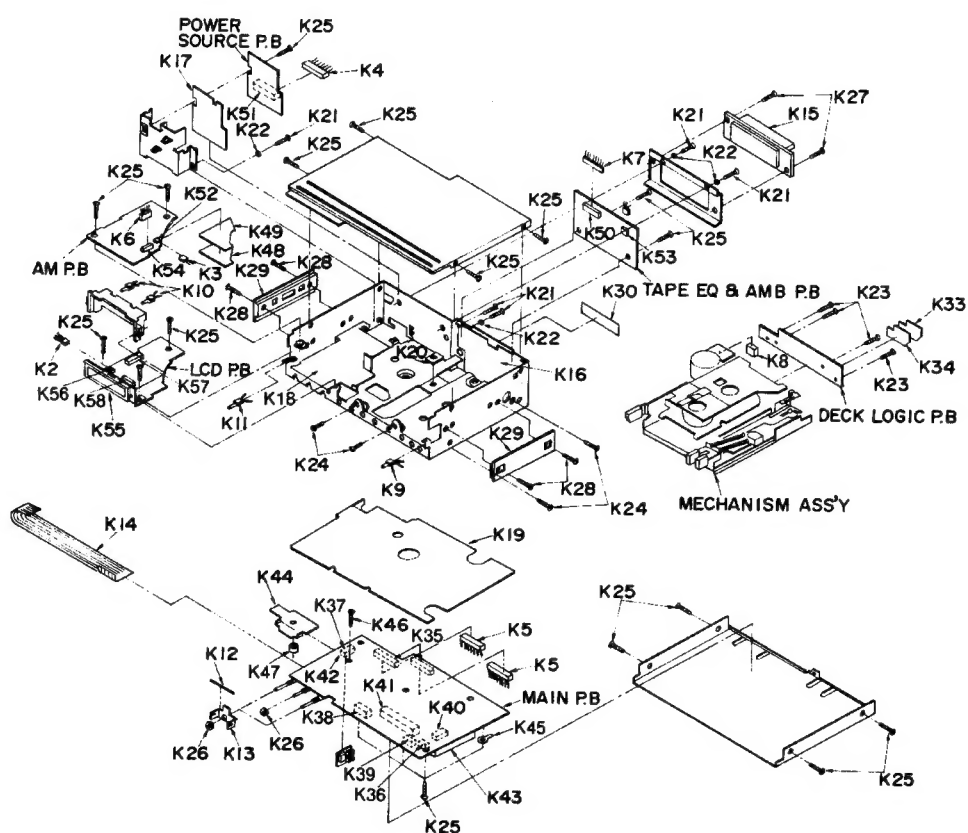
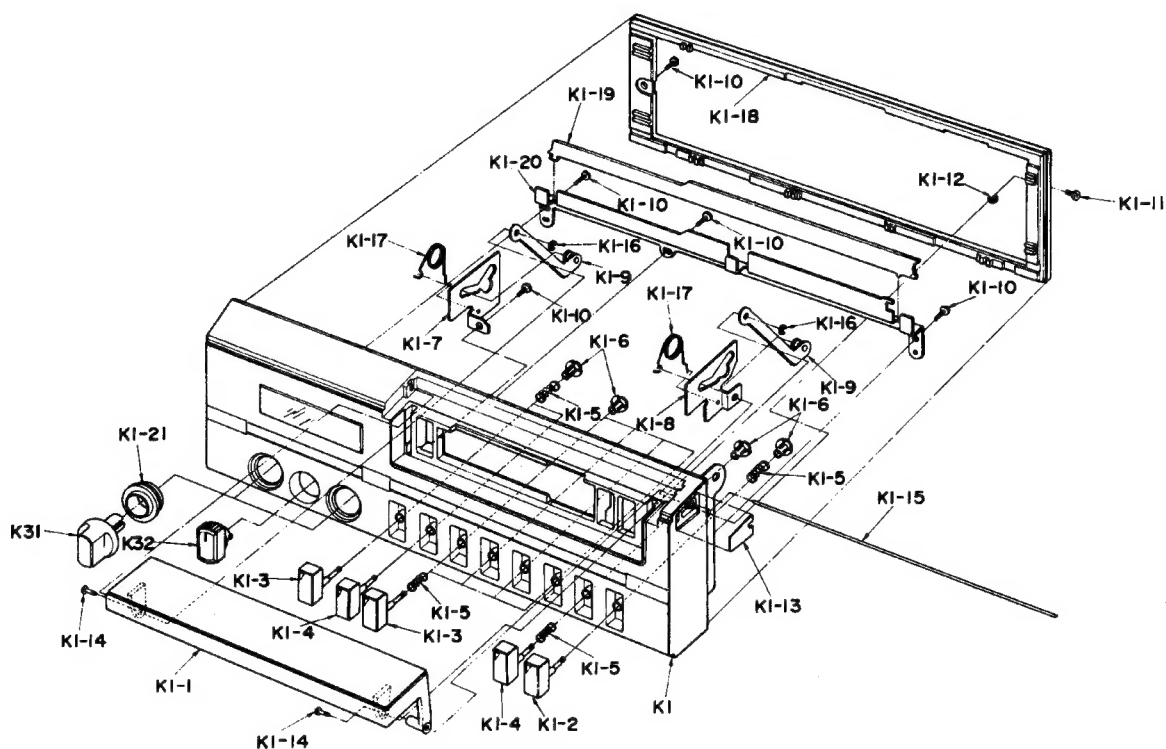
## MECHANISM PARTS LOCATION



## ■ SPECIFICATIONS

Takeup Torque	30~55 gcm
Fast Forward Torque	35~70 gcm
Rewind Torque	35~70 gcm
Pressure of pinch roller	300~450 g
Wow and flutter	Less than 0.15% (WRMS)

# CABINET PARTS LOCATION



## REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
MECHANICAL PARTS								
M 1	RFH6Z	Playback Head Ass'y	M 64	RFS301Z	Spring, Lock Release Plate	K 1-17	RUS515Z	Spring, Cassette Cover
M 2	RFB30Z	Main Belt	M 65	RFS346Z	Spring, Head Panel Ass'y	K 1-18	RHG9000Z	Rubber, Front Panel
M 3	RFE108Z	Screw, Case Lifter etc. M'tg	M 70	MMX4H2WDA	Motor Ass'y	K 1-19	RGE74Z	Panel, Indicator
M 4	RFD153Z	Case Lifter	M 71	RSE99Z	Key Off Plunger	K 1-20	RUHSYA	Angle, Indicator
M 5	RFE90Z	Screw, Pack Presure Spring M'tg	M 72	RFF19Z	Flywheel Ass'y	K 1-21	RHG3001Z	Rubber, Knob
M 6	RFK77Z	Spacer, Pack Pressure Spring	M 73	RFF18Z	Flywheel Ass'y	K 2	RWN1M1300AJH	Socket Ass'y, CN 108, 408
M 7	RFS306Z	Spring, Pack Presure	M 74	RFN65Z	Nylon Washer, Flywheel Ass'y	K 3	RWN2M1300AJH	Socket Ass'y, CN 102, 302
M 8	RFD152Z	Cassette Case B	M 75	RFT6Z	Circuit Board	K 4	RWN3M1300AJH	Socket Ass'y, CN 106, 107, 606
M 9	RFS296Z	Tension Spring	M 76	RFN72Z	Washer, Circuit Board	K 5	RWN4M1300AJH	Socket Ass'y, CN 105, 505
M 10	RFY239Z	Change Lever	M 77	RFE112Z	Screw, Transistor M'tg	K 6	RWN5M1300AJH	Socket Ass'y, CN 104, 304, 404
M 11	XUC2FT	E Ring, Main Plate, etc. M'tg	M 78	RFE113Z	Screw, Motor Ass'y M'tg	K 7	RWN6M1300AJH	Socket Ass'y, CN 502
M 12	RFU19Z	Main Plate	M 79	RFE91Z	Screw, Key Off Plunger M'tg	K 8	RWN7M1300AJH	Socket Ass'y (Tape, Motor)
M 13	RFS296Z	Spring, Switch Operation Plate	M 80	RFS305Z	Spring, Switch Lever Arm	K 9	RWN8M1300AJH	Socket/Lamp Ass'y (PL 4)
M 14	RFE110Z	Screw, Gear Plate A M'tg	M 81	RFY252Z	Switch Lever Arm	K 10	RWN9M1300AJH	Socket/Lamp Ass'y (PL 1, 5)
M 15	RFD150Z	Gear Plate A	M 82	RFS297Z	Reverse Spring, Change Plate	K 11	RWN10M1300AJH	Socket/Lamp Ass'y (PL 2)
M 16	RFG40Z	Main Gear	M 83	RFS308Z	Spring, Key Off Plate B	K 12	RUS542Z	Spring, Volume
M 17	RFN87Z	Nylon Washer, FF/REW Gear	M 84	RFY255Z	Key Off Plate B	K 13	RMD2056Z	Bracket
M 18	SMQ4930	Washer	M 85	RFY254Z	Key Off Plate A	K 14	RJE161Z	Lead Wire
M 19	RFS299Z	Spring, FF/REW Gear	M 86	RFX78Z	Spacer, Key Off	K 15	RJS0R1Z	Socket
M 20	RFG42Z	FF/REW Gear	M 87	RFN88Z	Nylon Washer, Flywheel Ass'y	K 16	RMX248Z	Insulator
M 21	RFG41Z	Reverse Gear	M 88	RFE114Z	E Ring, Flywheel Ass'y M'tg	K 17	RMX249Z	Insulator
M 22	RFK74Z	Spacer, Gear Plate	M 89	RFE108Z	Screw, Motor Bracket M'tg	K 18	RMX250Y	Insulator
M 23	RFY241Z	Reed Plate	M 90	RFS304Z	Spring, Eject Lever	K 19	RMX252Y	Insulator
M 24	SMQ4928	Washer, Reel Table	M 91	RFY251Z	Lever, Eject	K 20	RMX256Z	Insulator
M 25	RFJ26Z	Reel Table	M 92	XUC3FT	E Ring, Eject Lever M'tg	K 21	XSN3 + 4S	Screw, Bracket, Socket M'tg
M 26	RFN86Z	Nylon Washer, Reel Table	M 93	XTN26 + 4H	Screw, Motor Bracket M'tg	K 22	XWA3B	Washer
M 27	RFS309Z	Spring, Reel Table	M 94	XYN26 + J5	Screw, Lever M'tg	K 23	XTN2 + 4B	Screw, Circuit Board M'tg
M 28	RFS295Z	Spring, Pinch Roller Arm Ass'y	M 95	RBC483Y	Button, Eject	K 24	XTV26 + 5F	Screw, Deck M'tg
M 29	XSN2 + 4	Screw, Playback Head M'tg	M 96	RBC482Y	Button, REW	K 25	XTV3 + 6BFN	Screw, Bracket, Circuit Board M'tg
M 30	RFS293Z	Plate Spring, Playback Head	M 97	RBC482Z	Button, FF	K 26	XNS7D	Nut Volume Mute Int Cum
M 31	XYN2 + 11F	Screw, Tape Guide M'tg	M 98	RUB284Z	Lever, Eject	K 27	RHE5047Z	Screw, Socket M'tg
M 32	RFN89Z	Washer, Tape Guide M'tg				K 28	RHE5048Z	Screw, Slider M'tg
M 33	RFE107Z	Tape Guide				K 29	RKC80Z	Slider
M 34	RFY237Z	Pinch Roller Operation Plate Ass'y				K 30	RG1160Z	Name Plate (For RM-1300A)
M 35	RFU18Z	Head Plate Ass'y				K 30	RG1167Z	Name Plate (For RM-1400A)
M 36	RFN12Z	Pinch Roller Arm (Right)				K 31	RBN651Y	Knob, VOLUME, INT COM (For RM-1300A)
M 37	RFN51Z	Washer				K 31	RBN702Z	Knob, VOLUME, INT COM (For RM-1400A)
M 38	RFY242Z	Switch Lever Arm				K 32	RYTM1100NHD	Mute Knob Ass'y
M 39	RFY253Z	Lift Up Lever				K 33	RMC910Z	Shield Cover
M 40	RFS307Z	Reverse Spring, Eject						
M 41	RFK75Z	Spacer, Push Plate						
M 42	RFY250Z	Push Plate						
M 43	RFK76Z	Spacer, Push Plate						
M 44	XUC15FT	E Ring, Push Plate Spacer						
M 45	RFY238Z	Timing Plate						
M 46	RFS294Z	Spring, Timing Plate						
M 47	RFY240Z	Rack Plate						
M 48	RFQ22Z	Head Base Plate Roller						
M 49	RFN13Z	Pinch Roller Arm (Left)						
M 50	RFY243Z	Pull Plate						
M 51	RFE111Z	Screw, Lever Bracket, etc. M'tg						
M 52	RFY249Z	Lock Sensor Push Plate						
M 53	RFY245Z	Rewind Lever						
M 54	RFS300Z	Spring, Rewind, FF Lever						
M 55	RFY244Z	FF Lever						
M 56	RFY246Z	Non-Lock Plate						
M 57	RFT7Z	Circuit Board						
M 59	RFD151Z	Bracket, Lever						
M 60	RFS303Z	Spring, Lock Plate						
M 61	RFY248Z	FF/REW Rock Plate						
M 62	RFS302Z	Spring, Lock Release Plate						
M 63	RFY247Z	Lock Release Plate						
			CABINET PARTS					
			K 1	RYPM1300AJHD	Front Panel Ass'y (For RM-1300A)	K 34	RMX260Z	Insulator
			K 1	RYPM1400AJHD	Front Panel Ass'y (For RM-1400A)	K 35	RJP12G10Z	Plug, CN 105, 106
			K 1-1	RYQM1300AJHD	Cassette Cover Ass'y	K 36	RJP2G4Y	Plug, CN 102, 108
			K 1-2	RBC481Z	Button, AMB (For RM-1300A)	K 37	RJP3G1Z	Plug, CN 109
			K 1-2	RBC638Z	Button, AMB (For RM-1400A)	K 38	RJP3G10Z	Plug, CN 107
			K 1-3	RBC481Z1	Button, Preset, Band (For RM-1300A)	K 39	RJP3G4Y	Plug, CN 101
			K 1-3	RBC638Z1	Button, Preset, Band (For RM-1400A)	K 40	RJP4G10Z	Plug, CN 104
			K 1-4	RBC481Z2	Button, M/ME, Dolby, SENS (For RM-1300A)	K 41	RJS236Q8Z	Plug, CN 103
			K 1-4	RBC638Z2	Button, M/ME, Dolby, SENS (For RM-1400A)	K 42	RJS3M1Z	Plug, CN 109
			K 1-5	RDS3094Z	Spring, Preset Button	K 43	RMC905Z	Shield
			K 1-6	RHR475Z	Stopper, Button	K 44	RMY188Z	Heat Sink
			K 1-7	RUL697Z	Bracket, Cassette Cover, Left	K 45	RTJ1026Z	Terminal
			K 1-8	RUL698Z	Bracket, Cassette Cover, Right	K 46	XTB3 + 8BFZ	Screw, Heat Sink M'tg
			K 1-9	RUL9004Z	Lever, Cassette Cover	K 47	RHM168Z	Spacer, Heat Sink
			K 1-10	XTN26 + 8B	Tapping Screw	K 48	RMC1026Z	Shield
			K 1-11	XSN3 + 6S	Screw, Cassette Cover Bracket	K 49	RMX301Z	Insulator
			K 1-12	XWA3B	Washer	K 50	RJP10G9Y	Plug, CN 502
			K 1-13	RGK1367Z	Ornament	K 51	RJP15G10Z	Plug, CN 601
			K 1-14	RHM164Z	Shaft, Cassette Cover	K 52	RJP2G9YA	Plug, CN 302
			K 1-15	RDF828Z	Shaft, Cassette Cover	K 53	RJP3G9YA	Plug, CN 501
			K 1-16	XUC12F	Stop Ring	K 54	RJP7G10Z	Plug, CN 304
						K 55	RADAM834	Display Tube
						K 56	RJP2G9Y	Plug (2P), CN 408
						K 57	RJS22Q7Z	Socket, CN 403
						K 58	RJS30Q5Z	Socket, CN 401